THE EFFECT OF TWO DISABILITY-AWARENESS TRAINING MODELS ON STIGMATIZING ATTITUDES AMONG FUTURE HEALTHCARE PROFESSIONALS

by

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ABSTRACT

Stigmatizing attitudes about disability are a major problem for people who have disabilities, those who interact with them in healthcare settings, and society at large. Past efforts to decrease the negative attitudes surrounding disability have used interaction and exposure activities as mechanisms of change. Research involving Contact Theory shows that casual, unstructured contact often results in stereotype confirmation and a worsening of attitudes between groups of people. Although Contact Theory was developed and tested in the arena of race and ethnicity, recent research has indicated that racial prejudice and disability stigma are essentially the same processes, which promotes the use of Contact Theory in disability research. Using the principles of Contact Theory for program design, this research compared two different workshops intended to decrease negative attitudes about disability among future healthcare professionals. Students from three college majors (Physical Therapy, Occupational Therapy, and Recreation) were recruited and randomly assigned to an experiential workshop or a didactic workshop. Participants were administered the Multidimensional Attitudes Scale (MAS) towards persons with disabilities following the workshops. These data were compared with a control group of students from the same majors to determine the efficacy of the workshops in promoting attitude change. Results indicate that neither workshop decreased negative attitudes compared to the baseline results for students from these college majors. The measurement of attitudes using the MAS is a central issue identified

in this research. Identifying personal levels of stigma versus awareness of social patterns of stigma is an area needing further research prior to renewed comparisons of workshop curricula.

To my father, Wayne K Barney (1929-2000). He set aside his own chance for a doctoral degree in lieu of raising a wonderful family. His encouragement and forethought have made it possible for me to achieve the dream he did not.

"Mom and I are looking forward to all the things you are going to surprise us with, as you have done so often before."

Thanks Dad, I love you.

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CHAPTER I

INTRODUCTION

Stigmatizing attitudes are a major social problem. This is true for those in training to become healthcare professionals, for people with visible physical impairments, and for society at large. When a person enters a healthcare related field and seeks to become a licensed professional, he or she may do so with nothing more than the vague idea that he or she will help clients return to full participation in life. The rewards of being involved in healthcare are centered on relationships with patients and the gratification of facilitating growth based on these relationships. Not all clinical staff, however, achieve this ideal treatment model. If the future professional is not well prepared to enter practice, he or she may try to connect with patients based solely on knowledge about a certain diagnosis. When treatment is based on a certain *type* of condition rather than an individual's strengths and attributes, outcomes will suffer because people will perform to the stereotype (Jussim, Palumbo, Chatman, Madon, & Smith, 2000; Romanello, 2000). Stereotypes often indicate the presence of negative attitudes and are easily perceived by the patient. Whenever this happens, the therapeutic relationship will be degraded and intended outcomes will be stunted, resulting in diminished professional rewards (Roush, 1986).

Stigmatizing attitudes also impact the people who are targeted by them. Individuals who, in almost every respect, are ordinary members of society are stigmatized

for looking different. The "mark" of difference ascends to a "master status" overshadowing any thoughts of sameness (French, 1984, p. 254). This process of stigmatization may lead to feelings of revulsion or negative affect toward people with visible impairments (French, 1984). Allport (1954) wrote, "[continuous] oppression may destroy the integrity of the ego entirely, and reverse its normal pride, and create a groveling self image" (p. 152). The ripple effect produced by the stigmatizing process is potentially harmful not only to an individual with disabilities, but also the people in his or her social support network (French, 1984; Goffman, 1963). People with visible impairments are more likely to be seen as dependent, childlike, passive, sensitive, miserable, and less competent as compared to "normal" people (Linton, 1998, p. 25). Negative attitudes about disability are quickly turned into "dehumanizing stereotypic caricatures" (Dovidio, Major, & Crocker, 2000, p. 1). Expectations of worth or value based solely on a stereotype may lead to an "interaction strain" during the most mundane of social interactions. People shorten conversations, decrease eye contact, or engage in superficial conversation in an attempt to end the discomfort (Siller, 1968). To the extent that an individual perceives this treatment, he or she may lose some measure of self-worth, believing the messages and labels are correct (Milligan & Neufeldt, 2001). Some people report that stigmatizing attitudes are a greater source of limitation than the impairment itself (Canadian Union of Public Employees, n.d.; Murphy, 1987). Davis (1961) maintains that the stilted nature of conversation is due in part to the visible impairment being the focus of any such interaction, yet rules of social etiquette prohibit direct verbal reference to it. Neither of the individuals are able to express themselves fully and achieve genuineness during the interaction, thus preventing the formation of a

satisfying social relationship. A person looking for friendship and mutual support may then turn to others with like impairments where there is more open sharing and mutual social support. Such self-help groups may be effective, but further limit social interaction; as a result, the person's social world dwindles (Christopherson, 1968).

Society bears the hidden cost of overlooking valuable contributions that might otherwise be expressed in the workplace. Negative attitudes prevent many people who have physical impairments from supporting themselves through productive wage-earning. In the United States, 65% of people experiencing a spinal cord injury are unemployed and remain so for the duration of their lives (National Spinal Cord Injury Statistical Center, 2009). In addition to lost talent, society also bears a quantifiable monetary cost to maintaining people in a non-productive state over a lifetime (National Spinal Cord Injury Statistical Center, 2009). In the United States, such costs include income replacement through the Social Security Act (Redbook, 2009). The benefit for disabled workers is known as Social Security Disability Insurance (SSDI). At the end of 2008, 7.4 million disabled workers and 1.8 million dependents of those workers were receiving SSDI payments with a total cost to the government of $106 billion (AARP Public Policy Institute, 2009). Every person receiving SSDI payments is also eligible for health insurance provided by Medicare (DeWitt, 2003). The total expenditure for Medicare rose to $431 billion in 2007, but there are no reports that quantify or partition the costs for people with disabilities younger than age 65 (US Department of Health and Human Services). Additional government services include transportation aid in the form of paratransit services, education assistance from the Division of Vocational Rehabilitation, and housing subsidies available from Housing and Urban Development (HUD

Department of Housing and Urban Development). When considered economically, devaluing individuals with disability in the workplace is a costly practice. Despite equal opportunity law such as the Americans with Disabilities Act (Title I), which was passed in 1990, employment rates for people with disabilities have continued to decline in the 20 years hence (Barnow, 2008).

Contact Theory suggests that, under certain conditions, contact between groups can lead to a reduction in stigmatizing attitudes. In the 1950s, Allport introduced and wrote extensively on Contact Theory as a method of improving race relations. As a result of his investigations, he determined the conditions most efficacious in reducing negative attitudes for use in group settings. Allport concluded that contact between groups that is sanctioned by a larger body, is intimate in nature, includes cooperative purpose, and tends to equalize the status between participants can result in development of more positive attitudes.

A ripe moment for the use of Contact Theory to shape attitudes exists in rehabilitation. The transitional phase immediately following injury or disease may be of short duration, but it charts a course and will have lasting impact. Healthcare professionals come into contact with individuals with impairments during this transition. They play a significant role in the rehabilitation setting, which is a transitional phase and marks a "crossing over" from a normative group to a stigmatized group for people who experience long-term impairments—especially those who must use visible assistance-devices such as wheelchairs. To facilitate the individual's adaptation to a new lifestyle that includes functional deficits, there are professionals such as occupational and physical therapists and therapeutic recreation specialists. Some researchers have found that these

clinical staff members may actually have *more negative* attitudes about disability than the general population (Basnett, 2001; Tervo, Palmer, & Redinius, 2004). It has also been reported that people with disabilities are unhappy and dissatisfied with the quality of their contacts with nurses or physicians due primarily to negative attitudes (Scullion, 1999). When these attitudes exist, they interfere with the delivery of optimal health services and foreshadow larger problems that arise from poor communication. These nurses, doctors, therapists, and clinicians are in a unique position of influence and their attitudes will certainly have an effect on the eventual success of their patients (Evans, Assadi, & Herriott, 2005). In light of the influence these professionals have, their educational experience should help to remove or decrease the extent to which stigmatizing attitudes are ingrained and entertained in the mind of the provider. By doing so, students will be better prepared to meet the professional standards of the various healthcare organizations.

The use of Contact Theory to decrease negative attitudes among future professionals may not be effective due to limitations contained in the theory or by limitations inherent in the mind of the individual. Stigmatizing attitudes about physical impairment may be so deeply ingrained through social learning that intermittent or infrequent workshop-type contact may be ineffective in changing long-held attitudes. The most effective way to dispel stigma based on physical attributes may be through prolonged contact of an intimate nature. It is noted that, over time, people who are close to the stigmatized person may develop a "courtesy stigma" wherein the nonstigmatized associates may actually act as though they themselves are a member of the stigmatized group (Goffman, 1963). This may be a result of "standing up" for the person unable to do so personally. Perhaps long-term association with an individual who is constantly

discredited, disdained, and shunned results in a sense of injustice and consequently, a more effective route to influence stigma might be to use a social justice model focused on obtaining civil rights. Beyond the limits of the theory, but acknowledged by it, is the resistance to change in the mind of the stigmatizer. Changing negative attitudes may not be a function of intergroup contact, but rather of the personality structure of the healthcare professional. There may be deeply seated ego-involvement in being a "helper" of the wounded and broken people found in rehabilitation settings. The ego may not allow the person with an impairment to return to full stature and status in society because that would nullify the inverted power structure of helper and helpee. If the personal reasons for being a healthcare professional are connected to a sense of worth that comes from helping, the attitudes about disability may not be open to reorganization. Therefore, the purpose of this study is to examine the effect of two disability awareness training models on stigmatizing attitudes among future health professionals.

Author Bias

I experienced a spinal cord injury in 1974 and have been a wheelchair-user since then. I have experienced stigma first-hand in multiple social realms such as dating, shopping, job hunting, and casual social contact. However, my primary interest in stigma is not based on how stigma is experienced or perceived by people with visible impairments. Instead, I am fascinated with the processing of information by the general public that arouses "extreme discomfort" and eventually results in the formation of stigmatizing attitudes (French, 1984). In general, I believe the social mechanisms and machinations of the mind that establish the "difference" (rather than the sameness)

between people needs to be further researched to determine how malleable the appraisal is and how it can be effectively modified.

I worked in rehabilitation care for more than 10 years as a social worker, with a specific assignment to the spinal cord injury program. This allowed me to have contact with people undergoing a major transition in response to injury. Part of the process of reintegration involved discovering their new "stigmatized status" for the first time. This unique contact was the impetus for this inquiry.

I believe that it is more important to learn how to influence the formation of stigma among healthcare professionals than to detail how it is experienced or perceived by people with impairments because of my professional experience in rehabilitation. I witnessed people who adapted relatively easily to personal injury only to find the harder step was to re-enter the social world. I am most interested in stigmatizing attitudes that are exhibited among those embarking on a career as a healthcare professional. Each healthcare professional brings with him or herself attitude-shaping experiences from a lifetime of exposure and socialization about disability. Due to the increased contact and the presumption of a helping relationship being established with people who have disabilities, research should be carried out that will inform practice and educators on how to effectively expose and reshape stigmatizing attitudes among current and future professionals (Barnes, 1996).

CHAPTER II

REVIEW OF LITERATURE

Contemporary View of Attitudes

The definition of an attitude is not yet universally accepted, but most literature concedes that attitudes are multidimensional social constructs (Findler, Vilchinsky, & Werner, 2007). The various components of an attitude are thought to be affective, cognitive, and behavioral. The affective component consists of emotional reactions formed through evaluation of a certain object, concept, or behavior (Ajzen & Fishbein, 2000). Cognitive roots of an attitude consist of thoughts, perceptions, and conceptualizations of the target object. Lastly, the behavioral component consists of the willingness to engage in actual behaviors based on the thoughts and emotions. Certain referent objects may inspire a stronger emotion than others. In cases where there is less intensity of emotion, there may be more reasoned cognition leading the way in making up an attitude. Some attitudes about unfamiliar objects or themes may require intentional thought and processing, while others are more automatic and effortless. In any situation, an individual will tend to use the least amount of effort or cognitive processing required to formulate his/her attitude. Reliance on more automatic responses facilitates daily social interaction that is easy, fluid, and decreases moments of anxiety or tension. Occasionally, a situation arises that requires more depth of evaluation. The degree of effort and cognition may be considered on a "continuum with more automatic processes

(shallow) at one end and more complex levels of cognitive evaluation (deep) at the other" (Ajzen & Fishbein, 2000, p. 9). Under high levels of motivation, an individual may engage in extensive deliberation of available information about a given object. Contextual factors such as work, shopping, transportation, and other forms of social interchange can provide a setting and motivation for re-evaluation of attitudes.

An attitude is not fixed and stable over time and is, therefore, reliant upon a set of easily accessed beliefs. The beliefs may be inaccurate or based on stereotypes, but they are stable until challenged in some way. An attitude can be changed through concerted effort focused on "context induced shifts" in accessible beliefs (Ajzen & Fishbein, 2000, p. 16). Given the appropriate opportunity, attitudes can be determined or reformulated in "real time" as the information and situation impact an individual's belief system. Although susceptible to change, attitudes are nevertheless built on beliefs, and altering those beliefs requires thought-provoking engagement about a given subject.

Similar to attitudes in the general sense, stigmatizing attitudes arise from a judgment or interpretation about observed differences. Interpretation may lead to the development of negative attitudes associated with certain cues, such as visible impairments. The lens that identifies physical differences and infers a negative value appraisal is called "stigma."

The term "stigma" comes from ancient Greece. Stigma was essentially a "mark" placed upon certain people by the ruling elite class to designate a lower social status. Greek society condoned the placing of such a mark on slaves or criminals to facilitate quick identification (Crocker, Major, & Steele, 1998). The mark was an active and *intentional* designation that made apparent certain characteristics or attributes that might

otherwise remain undiscovered. In ancient Greece, that stigma provided boundaries in a class-oriented society. Anyone with a stigmatizing mark was to be "kept out" because of his or her lower status. A more visible cue facilitated quick social judgments and appropriate interaction. The invisible trait was made visible and the marked person was set aside as less than fully human (Goffman, 1963).

Not all marks are the delineating acts of society, but all require some interpretation based on relevant cultural cues. Some marks are artifacts of genetics, such as hair or eye color. Marks may also be the residual effects of accidents or injuries, such as scars or physical impairments. Stigma does not separate people into two concrete groups: to some extent, "all people participate as both stigmatizer and stigmatized" (Goffman, 1963, p. 138). It is a flexible boundary state based on certain social situations. Stigma may become problematic when it becomes a social norm based on the judgments of the dominant class of a society. In such cases, the discounted or stigmatized person is a catalyst for altered thought processes and responses. Because careful consideration requires energy of thought, the least taxing response would be to avoid contact with anyone of a stigmatized group. It is important, for the sake of efficiency in social situations, that status be made readily visible.

The understanding and use of the term "stigma" was brought into modern-day sociology by Goffman during the early 1960s. Beginning with the Greek concept, Goffman identified how discounted status could be assigned to people based on three sets of characteristics. The first set of characteristics revolved around the concept titled "blemishes of character" and could include criminal behavior or sexual deviance. The second set of characteristics he termed "abominations of the body" and would include

physical traits or differences that were easily observable. The third set of characteristics was titled "tribal stigma" and was assigned by race, tribe, lineage, or religion (Goffman, 1963, p. 4). Some of the individuals assigned "tribal stigma" were visibly different and others were not. Members of various religious groups may not have a distinct look, but are still impugned based on beliefs. History is replete with examples where marks were given to aid in establishing boundaries. Although wearing a yellow armband in Nazi Germany was not as brutal as the act of branding a person in Greek culture, the intent was the same. In each example, the stigma, and the relevant judgment, was based on visual cues. In order for that society to effectively enact and enforce separation, such cues needed to be apparent. Deciphering the status or belonging of each social contact is tedious and requires effort, so stigma serves an important function at the individual level. Society is also served in that marked individuals can no longer "fake" their status in order to "pass" as one of the status holders and, therefore, boundaries are maintained.

In Goffman's (1963) view, social stigma is the same whether based on physical traits or character traits. He claimed that anyone who had visibly different characteristics of body would be stigmatized. The visible cue in this case is more accurately called an attribute, rather than a mark, because it is not socially applied. The critical connection to stigma is the *interpretation* of the attribute where it is given social meaning by the group wielding the power to make value judgments about individual members of society. Dovidio, Major, and Crocker (2000) say that "the processes of stigma [are] very highly situationally specific, dynamic, complex, and nonpathological" (p. 2). With this claim, they acknowledge that social processes are interpreted at the individual level based on that individual's cognitive abilities and limitations and on social information and

experiences to which the person has been exposed. Even if stigmatizing attitudes are nonpathological and simply serve to guide social interaction, as Dovidio et al. suggest, separation is still the result.

Negative attitudes may vary across time, place, and culture, even when the condition itself does not. The interpretation of certain attributes or applied "marks" may have strong meanings only in certain cultures or only at certain times in history (Fine & Asch, 2000; Miller & Major, 2000). The stigmatized person is suddenly exposed as different, and the "characteristics of different-ness override any other attributes that might engender a sense of commonality" (Zola, 1983, p. 199). The stigmatizer engages in a subjective judgment based on his or her history and exposure to social values and this judgment becomes the belief system upon which stigmatizing attitudes are based (Van Brakel, 2006; Whiteman & Lukoff, 1964).

Social Constructions of Disability

Stigmatizing attitudes are attached to people with disabilities, not just physical impairments. In the language of the Americans with Disabilities Act of 1990, for an individual to be regarded as having a disability, his or her impairment must *interfere* with one or more major life activities. So, while many people with reduced function in their eyes would be classified as having a physical impairment, they may not experience any interference in accomplishing daily tasks. A person with such a common impairment, which is easily corrected with eyeglasses, is not considered to have a disability by definition, nor is he or she stigmatized (Abberley, 1987; Greenhouse,1999; Oliver, 1996). Disability, however, means that functional losses are perceived to "interfere" with normal function. There is a social judgment, having to do with commonality of experience, that

using lenses to adapt vision is inherently different than using a prosthetic to adapt walking. The threshold between insignificant impairment and stigmatized disability is not stable across time and culture. A survey of other cultures demonstrates that disability is not always accompanied by stigmatizing attitudes.

Prehistoric culture of the Middle East. People with differences in their physical appearance or capabilities are not universally discounted and given inferior status. In some cultures of the world, individuals with disabilities have fulfilled a valued role in religious or spiritual matters. Recent anthropological evidence from Israel, for example, is interpreted to show that, as far back as 12,000 years ago, a person with obvious physical differences such as a limp or shuffling gait was seen as a shaman and apparently enjoyed elevated status in the community (Grosman, 2008). Analysis of skeletal remains indicates that the person was a 45 year old woman. There are obvious spinal disabilities and asymmetrical formations of the legs that indicate the woman would have limped, dragged her foot, or had an awkward gait. The presence of 50 tortoise shells and also the bones of other animals, such as leopard, marten, eagle, wild boar, and cow, indicate high social standing and are exceptional grave offerings (Science Daily, 2008).

Early Greek history. In ancient Greek culture, there was some stigmatization attached to being born with a disability, but little stigma associated with being injured later in life through battle or life's travails. Early Greek writings indicate that, when babies were born with congenital disabilities in ancient Greece, it was an omen that the gods were displeased. In Sparta, such babies were put to death by law. In other city-states, this was not necessarily the practice (Braddock & Parish, 2001). Of greater interest to this study is the individual who becomes injured later in life rather than being

born with a disability. Adults with disabilities in Athens could go before the council to establish their condition of need and seek a small subsidy for their support. It is also noteworthy that men who became disabled in battle could receive a monetary pension or a food grant based on their actual need. There are surviving artifacts of artificial limbs and, in at least one case, the device was made of bronze, indicating that the owner likely had high status or was a person of distinction. Based on the historical evidence, Greek society allowed that power and wealth could co-exist with disability, but history does not record whether the status was achieved prior to onset of disability.

Feudal Europe. Religious organizations had great influence on social order and therefore, on the interpretation of disability during the middle ages. With so much social control being exercised by religious organizations like the Catholic Church, everyday life was interpreted in the context of the relationship between God and Man based on the Christian Bible. There is a great diversity of interpretations assigned to disability in this period. It is clear that some forms of disability, such as blindness, were treated with care and concern. Other disabilities, such as epilepsy or mental illness, inspired fear and suggested a connection to the supernatural or the occult. The person was said to be possessed by the devil; some were accused of being witches. Individuals exhibiting ataxic movements, tics, or speech disruptions were imprisoned, tortured and, in some places, executed (Braddock & Parish, 2001).

The Renaissance. Near the end of the middle ages, the Renaissance stirred an interest in travel and trade between cultures. In addition to goods, ideas were also exchanged. Alternate ideas were presented regarding the origin, interpretation, and usefulness of people with disabilities. There was eventually a shift away from the

supernatural explanations of the past in favor of a biological/medical model that explained disability as dysfunction that could be treated (Bullock & Mahon, 2001). The intellectual revolution of the Renaissance and the Enlightenment made great contributions to changing the way disability was interpreted in European societies. Scientific explanations about disease theory, anatomy, and genetics became plausible as alternatives to religious discourse.

African culture. Language is a powerful tool in the creation and maintenance of boundaries that separate people based on disability status. The people of Kenya that belong to the Maasai tribe do not have a cultural category that equates to "disabled people." They recognize physical impairment, but social attitudes about the person are not organized around the impairment. To be fully human in Maasai society is to "live communally with other people" (Talle, 1995, p. 56). Even children born with disabilities are treated equally because they are of the "same blood" and, thus, to mistreat them would be a sin. As children grow to adulthood, the most important role they learn to play is making individual contributions to the success of the community. In this regard, anyone can develop specialized talents regardless of any impairment. The Maasai do not stigmatize people who have disabilities. No matter how serious the condition may be, they are not excluded from the community (Talle, 1995). Indeed, other roles may be compensated for by other tribe members. Members of the same age cohort group are considered to be so close to each other that one member of the group can be replaced by another for purposes of a ritual or tribal expectation. The Maasai recognize disability as being in the normal range of human experience. The differences are simply an aspect of that person but have no interpreted meaning in social/cultural terms that would resemble

stigma. Rather than grasping commonality and arriving at the conclusion of "same blood" as the Maasai, Goffman concludes that contemporary Western cultures see anyone with abominations of the body as being "less than fully human." The focus can now be shifted exclusively to modern Western cultures in order to find the roots and mechanisms that have created a culture where disability is cast in an almost universally negative light.

Mechanisms of Negative Attitudes Toward Disability Culture in Western Ideology

In an editorial comment for the Independent Living Institute Newsletter, Brown (2001) expounded on his original position, published in a 1996 issue of Mainstream Magazine, wherein he declared that disability culture was real. He wrote:

> People with disabilities have forged a group identity. We share a common history of oppression and a common bond of resilience. We generate art, music, literature, and other expressions of our lives and our culture, infused from our experience of disability. Most importantly, we are proud of ourselves as people with disabilities. We claim our disabilities with pride as part of our identity. (para. 4)

Similar to other minority groups' history, people with disabilities found political forces codified the power and controlled the powerless (McDermott & Varenne, 1995). To obtain power required political activism, such as the sit-in style takeover of Joseph Califano's office in Washington, DC which lasted only one day (Fleischer & Zames, 2001; Frances & Silvers, 2000). He was then Secretary of Health Education and Welfare (HEW) in the Carter administration. The concurrent takeover of the HEW office in San Francisco lasted 25 days (Gilmer, 2010), and ended only when regulations were signed by Califano, beginning enforcement of the Rehabilitation Act of 1973, "which essentially granted civil rights to people with disabilities" (Shapiro, 1993, p. 68). This political

action seemed necessary because, “Disabled people have inhabited a cultural, political and intellectual world from whose making they have been excluded and in which they have been *relevant only as problems*” [italics added] (Abberley, 1998, p. 93). Abberley is inferring that disability is a “personal” problem, but by demanding civil rights such as architectural access, the person makes their disability “everyone’s” problem (Van der Klift & Kunc, 1994).

As the number of people who experience disability has grown, there is necessarily increased exposure and contact in mainstream society. In fact, in 1990, the U.S. Congress found that nearly 50 million Americans experienced a disability, making disability the largest minority group in the country (Smith, Austin, Kennedy, Lee, & Hutchison, 2005). Due to sheer numbers and the landscape of society following architectural-access mandates made by the Americans with Disabilities Act of 1990, the frequency of interaction between individuals with and without disability is on the rise. Some will still experience discomfort and awkwardness when interacting with a person with a visible disability (Evans, 1976). The easiest course of action is to avoid any contact with something that is not well understood. Interaction even in a limited sense would require confronting strong emotions that may not be altogether understood. Titley (1969) found that a “nearly axiomatic assumption exists in this [research] literature—namely that physically atypical persons, in this culture at least, exist in a highly marginal and disadvantaged social condition” (p. 29).

While researchers may be convinced, as Titley suggests, that negative attitudes are axiomatic, others may be less familiar with research, but still aware of social attitudes about disability. It is still a valuable exercise to look at the sources of such attitudes. The

processes that have contributed to the accepted "marginal social condition" can be explored based on a continuum of consciousness. Some assessments of disability may be so deeply seated in evolutionary psychology that one is completely unaware of the judgment taking place. Alternatively, others are learned through social influences such as religion, politics, and economics. After examining the perspective of evolutionary psychology, social and personal mechanisms will be reviewed. Smart (2009) found 10 sources of negative attitudes about disability. An examination of that list in modified form will establish the social and personal conceptions that inform the discourse about disability in the United States.

Biological attraction theory. Those who believe strongly in evolutionary psychology hold that negative attitudes about disability reside at the instinctual level and may not be accessible consciously. Each person may be genetically programmed to seek out the best physical partner and reject all others (Hildebrant & Latner, 2007; Johnson & Tassinary, 2007; Kenrick, 1996). Fascination with the perfect body, then, is a biological artifact that resides in genetics. When seeking a perfect body in this sense, the individual is not perfecting his or her *own* body, but seeking the perfect partner for reproduction (Neil, 2001; Tovee, Furnham, & Swami, 2007). On a visceral level, there is an innate need to continue one's genes into the next generation. The obvious choice to increase the likelihood of that happening is the most physically healthy specimen as partner (Clues to mysteries of physical attractiveness revealed, 2007). Johnson (2008) and Tassinary (1998) add to the research of Kenrick, investigating how evolutionary psychology leads people to discount potential mates on the basis of how they walk or move. Potential partners with disabilities could be excluded, at the subconscious level, based on the idea

that they are "damaged goods." Other researchers have termed this phenomena "aesthetic-sexual aversion," and they claim that the sight of certain disabilities inspires feelings of repulsion and discomfort on sensory and visceral levels (Hahn, 1981; Richardson, Hastorf, Goodman, & Dornbusch, 1961). Phelan, Link, and Dovidio (2008) came to the same conclusion when they examined the biological tendency of "disease avoidance" that may be harbored at the genetic, evolutionary level. Any variation from the "local species phenotype" would cue people to avoid close proximity with such individuals based on the threat of potential contamination. Because there would be a high cost for making a mistake and joining with a "diseased" individual, the system of partner evaluation would be skewed in favor of not making mistakes (Kurzban & Leary, 2001). Any person with any suspicious health feature would be eliminated, rightly or not, so as to "ensure a margin of safety" (Phelan et al., p. 363). Some subconscious factors may permanently reside in the psyche of all humans, but moving toward a higher level of awareness, there can be more active consideration of social messages and personal beliefs shaping attitudes about people with disabilities.

Existential dread. Life is tenuous and unpredictable and some people develop strong feelings of worry and fear about the nature of their existence. The mere sight of a person who has been injured during the mundane activities of life, such as driving a car, reminds the observer of his or her mortality. The individual may interpret the visual evidence as a threat to the naive belief of personal invincibility (Stephenson & Murphy, 1986). According to some actuarial tables, there is a one in five chance that any American will experience a disability that prevents him or her from working for at least 6 months (DeHaan & Busse, 2009). The loss of freedom, movement, choice, and life are

all threats to the givens that most people take for granted about their lives. Since injuries can and do happen from mundane activities, such as doing home repairs or being involved in a car crash during a daily commute, people everywhere are reminded of the tenuous nature of their existence when they see people injured in a daily routine that mirrors their own. Existential dread is uncomfortable to most people. But life is filled with death, disease, and randomness of disability. The most basic response by the general public is to isolate and avoid people who remind them of this fact (Davis, 1961; Douglas, 1966; Stephenson & Murphy, 1986).

Guilt. Disability can evoke feelings of guilt among people who perceive themselves to be free of any such physical restrictions. To simply enjoy the wonderful body that one has seems wrong, even guilt-inspiring, when around a person with a disability. Some people, when faced with this dilemma, want to do things to help others who are incapable—perhaps as a way of "paying a penance" for their own good fortune (Siller, 1967). If serving those thought to have needs is too uncomfortable, then simply avoiding the persons who inspire such an emotion is an easy course of action. In either condition, the anxiety that comes from being around people with disabilities can lead to dissociation from that group all together (Livneh, 1982). Murphy (1995) simply states that the general public regards anyone with any type of severe disability to be "downers." Avoidance of people representing disability may be an unconscious strategy to reduce internal turmoil. There are still other reasons to avoid contact with a stigmatized group. For example, if seen socially with such people of lower status, one's own character may be called into question.

Guilty by association. Some people fear that by simply associating with the "out-group" that their own character will be tarnished. There seems to be some implication that the person who would fraternize in such a way with the out-group must have adjustment issues of his or her own (Livneh, 1982). In public interaction, this may be seen in comments aimed at a person dating someone with an obvious physical disability. For the young woman dating a man with tetraplegia, for example, the accusation is that she has a caregiver/nursing complex or some personality disorder that makes her want to be a permanent "mother figure" (Karen Daynes, personal communication, April, 2008). A person being judged so harshly may feel a certain amount of social ostracism that results from merely seeing value in a person that society stigmatizes. To treat someone as an equal, when social cues place that person in a discredited group, seems to be an act of self-delusion and hints at character flaws. But a related action of providing care to someone who has visible needs is thought to be ennobling if the caregiver acknowledges the inferior status of the one being helped.

The sick role phenomenon. When a person does not conform to the behaviors expected of those who are sick or temporarily ill, negative judgments are made regarding their worth (Parsons, 1958). Society gives sick people a "pass" to withdraw from regular roles during sickness—they are given time and latitude to heal or recover. But disability often implicates conditions that are not temporary and may last a lifetime. The concept of rehabilitation, as contrasted with acute care, is based on receiving help from professionals as a preparation to re-enter society with physical limitations *in place*. The "sick role" described by Parsons involved assigned roles that the sick are *obligated* to play during the recovery period. These were:

- The obligation to "get well" and not malinger in the sick role.
- The obligation to seek competent help and cooperate with the process of treatment to regain health.

A problem with Parsons' conception of the "sick role" is that it is not able to explain lifelong or "permanent" conditions. Even after prolonged treatment, such individuals do not benefit from a "cure" in the sense of returning to pre-injury status. They are not seen as sick, and yet they are given some of the rights associated with illness. Murphy (1987) describes the state where society does not recognize "wellness" as a concept that can co-exist with life-long impairment when he states:

> The long-term physically impaired are neither sick nor well, neither dead nor fully alive, neither out of society nor wholly in it. They are human beings, but their bodies are warped or malfunctioning, leaving their full humanity in doubt. They are not ill, for illness is transitional to either death or recovery…The person lives in a state of social suspension until he or she gets better. The disabled spend a lifetime in a similar suspended state. They are neither fish nor fowl; they exist in partial isolation from society as undefined, ambiguous people. (p. 112)

Some disabilities, such as amputation or spinal cord injury, are very stable conditions. Objectively, a person with a permanent impairment may be "healthy" by medical definition. But the social appellation of being "unwell" lingers based on the functional status of muscles, inability to perform certain tasks, or the use of adaptive equipment. Livneh (1982) claims that the length of time a person spends in the sick role contributes to the development of negative attitudes.

Requirement of mourning. A person with a disability is expected to mourn appropriately for his or her supposed losses. The grieving process validates how important bodily function is to living a normal life. When patients are not "sad enough" about their condition, the noninjured public may suspect that the injured person is putting

on a good act, or they may conclude that he or she does not yet realize what has happened to him or her but "will in time'" (Dembo, Leviton, & Wright, 1956, p. 21). The assertion is that the person is neglecting the mourning and integrating process that is natural and normal, so anyone who does not display a depressed affect must not be "normal." This expectation exists among some health care workers. Nurses, for example, were found to give positive feedback to the patients who acted more "appropriately" depressed and negative feedback to the patients who seemed to have a happy affect. The subtle attitudes projected by the staff were apprehended by the patients in their care, and "some of the patients reported being aware of altering their behaviors to meet the imposed mandate of depression and grief" (Frank, Elliott, Corcoran, & Wonderlich, 1987, p. 620). In light of the expectation of being sad, those who violate the norm must be regarded as being in a state of denial or out of touch with reality.

Pervasive social norms. The emphasis on the beautiful body (hair, skin, proportions) and youthfulness in American culture devalues those outside the narrow definition of beauty. It is well-documented that cosmetic surgery rates are rising each year. In 2005, there were 333,000 such procedures reported for patients under age 18 as compared with 14,000 such procedures in 1996. In 2006, nearly 11 million surgical procedures were reported (among all age groups), with the vast majority of patients being women (Cosmetic surgery rates up, 2007; Redfern, 2001). It is clear that being attractive to others means complying with the norms associated with beauty (Saltzberg & Chrisler, 1995; Zuckerman & Abraham, 2008). People with disabilities are unable to meet such narrow definitions of attractiveness and are stigmatized by being out of the competitive market for attention (Silvers, 2002). Not meeting the prevailing standard for physical

attractiveness may not seem such a peculiar problem in that so many people can identify with that designation, but people with disabilities cannot even achieve the more broad social conception of "normal."

Normative comparison. The idea of "normal" is a relatively new concept. When people in power define what is normal in a cultural context, they also participate in stigmatizing those with differences who cannot co-exist with the ideal of normalcy (Freidson, 1965). "Normalcy" seems to have arisen around the beginning of the nineteenth century with the birth of statistics and the ideas surrounding the bell curve (Davis, 2002, p. 105). Prior to the advent of statistics, there was only an "ideal" for all to strive for, with varying levels of achievement. When "normal" became the standard, the implications were profound. A problem with the use of such categories is their binary nature, which relegates everyone to one group or the other. The discourse about being "normal" was intensified by Thomson (1997) when she coined the new term the "normate." She claims that there is purpose in defining and seeing the nonnormal, because it shores up the normate's boundaries. In Goffman's (1963) view, the two categories should be listed as "normal" and "stigmatized" because any person who resides outside the norm is stigmatized to a greater or lesser degree.

Taken to the extreme, there is only one "normate" as described by Goffman (1963): "in this culture [that person] is a young, white, male, married, urban, heterosexual, Protestant father of good education, fully employed, of good complexion, weight and height, and a recent record in sports" (p. 128). Terms like normal, normality, normalcy, and abnormal are used pervasively in society, but there is no universal ideal other than temporary consensus of the group holding the power. These abstract words

are reifications and are not tied to reality (Linton, 1998). Other social measures such as "status" can be thought of as reified concepts as well. Not only is status difficult to define, it is difficult to attain as well.

Status loss. By being viewed as different or as an "outsider," there is inherent loss of status. The person being stigmatized is seen as deviant and is given devalued status. The person who is pushed to the margin, who resides in the "liminal space" of society has lost a good deal of status indeed (Oliver, 1990, p. 20). Once an esteemed university professor, Murphy (1995) experienced a disability and returned to campus in a wheelchair. He made the following observation:

> I used to be invisible to black campus policemen, who often greeted a black colleague with whom I was walking by saying deliberately and clearly in the singular, "Hello, Professor, how are you today?" They now know who I am and say hello. I am now a white man who is worse off than they are, and my subtle loss of public standing brings me closer to their own status. We share a common position on the periphery of society—we are fellow outsiders. (p. 150)

Outsiders are less likely to be offered quality jobs, be promoted, or to have access to benefits such as health insurance. These factors make achieving self-support a daunting challenge (Longmore, 2003).

The productivity ethic. In Western ideology, such as that found in the United States, people are expected to be productive and support themselves. Anyone with physical traits that are "inferior" is prejudged as being worth less in the competitive job market. Topliss (1982) explains how this judgment is formulated and maintained:

> The values which underpin society must be those that support the interests and activities of the majority, hence the emphasis on vigorous independence and competitive achievement, particularly in the occupational sphere, with the unfortunate spinoff that it encourages a stigmatising and negative view of the disabilities which handicap individuals in these valued aspects of life. Because of the centrality of such values in the formation of citizens of the type needed to sustain the social arrangements desired by the ablebodied majority, they will

> continue to be fostered by family upbringing, education and public esteem. By contrast, disablement which handicaps an individual in these areas will continue to be negatively valued, thus tending towards the imputation of general inferiority to the disabled individual, or stigmatization. (p. 111)

The stigma of being unable to work or earn an honorable living can be illustrated in the word "handicapped." It is reportedly derived from "Cap in Hand," a moniker for begging in the streets (Amundson, n.d.). However, the history of the *word* handicap matters very little if the *idea* of begging being the only option left after experiencing a disability is a widespread belief. Some societies are more dependent on physical labor than others. In those societies, precious few jobs can be accomplished by a person with "altered" capacity other than begging. These individuals may have talents that have no value given the time, place, and culture and are then seen as living by the grace of the group.

The burden on society. People who are nonproducers are seen as a burden when resources are scarce and groups of people live close to the margin of success and failure (Wallis, 1993). Examples from tribal cultures indicate that members who could not participate in resource gathering were neglected and allowed to die or, in some cases, were actively killed. Children born with disabilities or elderly people who could not "reciprocate" the resource sharing, and had found no other role of value, such as midwife or shaman, were not helpful to the long term survival of the group. Infanticide and geronticide was practiced in many cultures where nomadic living was required due to limited resources. Such actions are based on the idea that reciprocity is a norm. Anyone who violates the norm and is unable to contribute endangers the success of the group against other groups, or endangers the survival of the group against nature. In such a

model or explanation of stigma, the theory is based on biocultural cues that ensure survival (Neuberg, Smith, & Asher, 2000).

Personal-moral accountability. Western cultures are founded on ideals of personal accountability and social justice. This ideal is made visible by the widespread belief that a person will eventually "get what is coming to him/her" or, in other words, what he or she has earned. These thoughts of justice may be rooted in religious beliefs or secular thoughts. From a religious perspective, the reason for the person's infirmity could potentially be attributed to some evil act that he or she committed (Albl, 2007). Hull (2003) acknowledges the Biblical connection of sin and disability, saying that Christian faith is part of the problem (judgment) for people with disabilities, rather than part of the solution. The nontheological discussion of accountability is centered on the idea of "blaming" victims for their own misfortune. This judgment is not based on sinful behavior, but insists he or she must have done something that merited the outcome and that alone is reason enough to harbor negative attitudes and avoid contact. This way of thinking plays a potent role for people who deal with traumatic injury and change from the observer of disability to the one making sense of it. When Christopher Reeve woke up and realized he was paralyzed following a fall from a horse, he says, "When I was injured I thought that it must be my fault, that I was being punished for being a bad person. That's a natural reaction" (Reeve, 2002, p. 38). Up to the day before his fall, Reeve was a member of a culture that promotes this sentiment and in the above quote from his biography he admits believing it until it affected him personally. In the milieu of emotions following trauma, this belief is unhelpful, whether harbored by the injured person or those of his or her support system.

Media influence. Various representations of disability can be found in the many forms of media. Barnes (1992) claims that these representations often portray disabilities as so overwhelming both psychologically and physically, that the person cannot achieve a lifestyle in any way comparable to the nondisabled. These storylines are based on stereotypes and caricature-like representations of disability. While the potential influence the media "wields on our perceptions of the world is debatable, there are few who believe it does not have any" (Barnes, 1992, p. 3).

The part disability usually plays in various forms of media is to facilitate a storyline or plot. A frequent script is to illustrate growth of a hero figure. The disability becomes something that must be conquered and through interpretation, disability is the negative, unacceptable state. Disability is rarely just a fact of life, a nonissue (Darke, 1998; Sheridan, 1996). It should be recognized that a person with limited exposure to disability may view a representation of disability and feel that it was well-done and accurate in its portrayal. Such an appraisal may differ greatly from that of people who experience the condition displayed on film. The recent film "Million Dollar Baby" directed by Clint Eastwood contributes to negative attitudes about disability. In the film, the lead actress makes the decision that death would better than to live with a disability. When a person with a disability, as in the film, sees suicide as the solution to life's problems, people agree that, under the circumstances, that is a logical, well-reasoned argument. That conclusion perpetuates the myth about quality of life for those who live with long-term disability (Shapiro, 1993).

Any medium of communication can be used in shaping social constructions of disability. Consider the text of an ad in *Backpacker* magazine titled "Sport+ Death=

Extreme Sport" (October, 2000), advertising a hiking shoe manufactured by Nike. After extolling the virtues of the shoe, Nike drives the point home with the following:

> Right about now you're probably asking yourself 'How can a trail running shoe with an outer sole designed like a goat's hoof help me avoid compressing my spinal cord into a Slinky on the side of some unsuspecting conifer, thereby *rendering me a drooling, misshapen, non-extreme-trail-running husk of my former self, forced to roam the earth in a motorized wheelchair with my name embossed on one of those cute little license plates you get at carnivals or state fairs, fastened to the back*?' [Italics added].

Suffice it to say that media influence is real, it is typically negative, and plays a key role in the formulation of stigmatizing attitudes (Barnes, 1992). Media representations can be avoided or discredited as being filled with artistic license, but all dialogue about disability must begin with the common usage and understanding of language. Because it is indispensable, and learned at such an early age, the associations are not reasoned out, but learned and accepted by young members of a given culture. Rather than look at language as a vehicle to disseminate societal attitudes, the last examination is to look at the actual words used in the dialogue about disability.

Language and power. Even the nomenclature used to talk about disability is part of the social construction of "disability" as it is cast and maintained in a negative light (Linton, 1998). Consider the words associated with various forms of disability. Words such as Mongoloid, idiot, imbecile, moron, feeble-minded, crippled, invalid, demented, insane, gimp, handicapped, lame, halt, midget, dwarf, pinhead, deaf and dumb, retard, schitzo, spaz, etc. are clearly disparaging in use and construction. Casling (1993) asked a simple and direct question about language. He wanted to know about the construction of the word *disability* with its social meaning and context. He aligned himself with Foucault and said that "language speaks us rather than the other way around." Foucault

asserts that language is the meeting place of the psychological and the political and that all language constitutes power. Linton (1998) seizes upon the idea of power, as it relates to disability, and claims society cannot begin a new dialogue about people with disabilities being "able" when the language used to debate the subject always casts the person with disabilities as nonnormative. The very language makes that discussion a lesson in futility. Yet there is no way to "re-master" the language game of our "ableist" culture (Linton, 1998). Such activities take place in the "gimp world" or "crip culture" but such euphemisms will not be accepted by those in power. Further, power cannot be granted, for that retains the idea of power. Some would say that equality must come first, and then the language game can be modified to reflect the new power structure (Linton, 1998). Others stand firm on the idea that using the current language game, equality can never be achieved (Byron, Cockshott, Brownett, & Ramkalawan, 2005; Byron & Dieppe, 2000).

Measuring Stigmatizing Attitudes

Determining the efficacy of any model of changing attitudes is dependent on accurate measurement of those attitudes. Several scales have been used to assess stigmatizing attitudes about disability over the past four decades. The most widely used assessments are the Attitudes Toward Disabled Persons scale and the Interaction with Disabled Persons scale (Antonak & Livneh, 2000). Examining the history of each is helpful in gauging appropriateness for continued use as a measure of attitudes about disability.

The original Attitudes Toward Disabled Persons Scale (ATDP), Form O, was developed in 1960 by Yuker, Block, and Campbell. It was made up of 20 items with a

six-point Likert style response set ranging from -3 (disagree very much) to +3 (agree very much). The items were of two types: The wording of items characterized people with disabilities as "different from" or "similar to" people with normal physical attributes. In 1962, Yuker introduced two new forms of the scale, labeled A and B. The new forms each consisted of 30 Likert style items and retained the 6- point Likert-type scale response set. As early as 1965, Felty criticized the language and wording of certain items saying they were "somewhat complex," the language was "not common," and that other words had multiple meanings. For a comparison of items from the three forms of the ATDP scale, see Table 1. During development of the three scales, Yuker, Block, and Younng (1966) established the psychometric properties of the ATDP. The test, retest reliability coefficients ranged from .71 to .83 for all three forms. Each form was also tested using split-half examination with coefficients ranging from .75 to .85. Internal consistency was measured and found to be acceptable with alpha coefficients ranging from .73 to .89. Construct validity was also tested using predictive relationships with known variables that would influence attitudes about disability. These variables included specific educational experiences, types of contact with disabled persons, and disability itself. For example, people who had educational experiences focused on disability recorded lower scores on the ATDP. Likewise, people with familial experience with disability also scored lower on the ATDP. Lastly, people with physical disabilities themselves scored lower on the scale, indicating less negative attitudes (Yuker et al., 1966).

This scale has been widely used over many years, and has been administered among diverse populations. By 1971, Kutner stated that it was "the most widely used of

Table 1

ATDP Item Comparison

	Items representing similarity	Items representing difference
Form O	Disabled persons are just as intelligent as non-disabled ones. Disabled people are the same as anyone else.	You should not expect too much from disabled people. It is almost impossible for a disabled person to lead a normal life.
Form A	Most severely disabled people are just as ambitious as physically normal people. Most disabled people feel that they are as good as other people	There are more misfits among disabled persons than among non-disabled persons. Most disabled people resent physically normal people.
Form B	Very few disabled persons are ashamed of their disabilities. Most disabled people do not feel sorry for themselves.	It would be best if a disabled person would marry another disabled person. Most physically disabled persons have different personalities than normal persons.

all the scales in this field" (p. 151). Antonak and Livneh (1988) described it as the best known and most widely used of the scales purporting to measure attitudes toward "disabled people" as stated in the title. Some criticisms still exist, despite the popularity of this instrument. First, several studies have determined that it is susceptible to social desirability bias (Gething, 1992). Subjects were able to "fake themselves good," which means the results are not valid indicators of attitudes about disability (Thomas, Palmer, Coker-Juneau, & Williams, 2003, p. 467). Second, the nature of attitudes about disability are thought to be multidimensional in nature (Thomas, 2002), and the various forms of the ATDP were all developed as unidimensional scales. Third, Gething (1991) also

criticized the format of the questions. Rather than focus on individual attitudes about disability, the ATDP was written to assess societal attitudes. In response to these criticisms, Gething (1991) developed a scale that became known as the Interaction with Disabled Persons (IDP) scale.

The Interaction with Disabled Persons (IDP) scale sought to update the language to modern "people first" wording and to address the unidimensionality of the older scale. Initial testing with the new scale showed strong convergent validity in that results correlated significantly with the ATDP. Construct validity was also found by correlating known prior levels of exposure to people with disabilities to the IDP scores. The final scale consisted of 20 items. The response format is a 6-point Likert-style scale anchored by "I disagree very much" and its opposite "I agree very much." Internal consistency across multiple tests consistently exceeded .75 (Thomas et al., 2003).

The IDP has six factor clusters. The factors are named discomfort in social interaction, coping/succumbing framework, perceived level of information, vulnerability, and the last two factors were "unnamed." As recently as 2009, Lacono, Tracy, Keating, and Brown state that since the inception of the tool, no studies have supported the six factor structure. They claim its widespread use was based on the assumption that it measured attitudes as a multidimensional construct, and that it exhibited good internal consistency. Thomas et al. (2003) joined the criticism of the unfinished nature of the IDP. They state that the four main clusters should undergo more refinement, perhaps by adding questions, and that several questions that do not load on any factor should be entirely dropped (2003). Research conducted by Lacono et al. (2009) found good internal consistency on one subscale labeled "discomfort." They suggest using the five

items from that factor as a "stand alone" measure in future attitude research but they caution that this one unidimensional subscale may not capture the multidimensional nature of attitudes. Thus, by some accounts, the newer IDP did not improve the measurement of complex attitudes about disability. Lacono et al. arrive at the conclusion that these two "dated" tools (ATDP, IDP) are not fundamentally sound and should not be relied on until they have been improved and revalidated by better statistical analysis methods.

Shortly after developing the IDP in 1992, Gething was also involved in development of the "Disability Awareness Package" for the University of Sydney. It was designed for training service providers on the subject of disability. The program is anchored by real contact with people who have disabilities. Additional techniques include written educational information, small group exercises, and disability simulations. Each is designed to foster discussion and dialogue that will promote positive attitude change about disability. To assess attitudes during the development of this curriculum, Gething designed a semantic differential scale. Such scales are useful in situations where people have strong emotions, but not well thought out opinions (Gething, 1992). The strong emotions may be based on inaccurate fears about disability rather than actual experience. This is why the program focuses on structured contact with people who have disabilities. The instrument uses 35 adjective pairs to assess attitudes about disability and was developed specifically for use among future healthcare professionals. The strong emotional or affective component of this scale leaves it vulnerable to the same criticism of being one-dimensional. This scale, along with others, has fallen short of the mark in measuring attitudes in a multidimensional way. As

recently as 2007, authors were trying to develop a better way to measure stigmatizing attitudes about disability.

In 2007, Findler et al. undertook the challenge to measure attitudes that captured the multidimensional nature described in literature. The Multidimensional Attitudes Scale (MAS) towards persons with disabilities was developed to measure three components of an attitude. The measured components are affect, cognition, and behavior. The affect component is based on emotional reactions, and is reflective of positive or negative feelings toward the referent object. The cognitive component represents thoughts, ideas, perceptions, and opinions about the referent object. The behavioral component captures the intent or willingness to behave in a certain manner when confronted by the referent object (Findler et al., 2007). By measuring attitude across these dimensions, the researcher can compare between the components and look for agreement. Initial testing yielded the highest level of negative attitude being found along the cognitive dimension and the least negative results in the behavioral dimension. Results of this new instrument were correlated with scores on other established scales such as the ATDP. The authors found significant correlations between the ATDP and the affective and behavioral subscales of the MAS, but not the cognition subscale, which found the greatest negativity. These results may suggest that the ATDP was not fully able to capture the full multidimensional nature of an attitude. Because the MAS seems to capture attitudes in a more complex way than previous measures of attitude about disability, it seems reasonable to use the instrument in the present study involving disability awareness research (Altman, 1981). When used as a composite score, the sum of the subscales appears to capture a more complete representation of an attitude.

Methods of Promoting Attitude Change

There are several methods employed by hospitals, clinics, government agencies, and academic institutions to decrease negative stereotypes about disability, such as workshops, role plays, simulation exercises, diversity training, sensitivity sessions, and consumer mentoring sessions (Berrol, 1984; Burgstahler, 2004; Chubon, 1982; French, 1992; Glazzard, 1979; Grayson, 1996; Kisabeth & Richardson, 1985). In a meta-analysis of research reporting use of these methods, Donaldson (1980) writes,

> It is important for the practitioner to remember that short, structured presentations of, or experiences with, persons who represent nonstereotypic images of disability and are of equally valued status in relation to participants, have been predictably effective in short term attitude modification. (p. 511)

Using structured contact or facilitated encounters between people with disabilities and those without disabilities to influence stigmatizing attitudes has been used in the past, but not always with positive results (Hamilton, 1983; Hedrick, 1986). Donaldson (1980) analyzed 24 studies based on personal contact as an agent of change and found that only 14 studies yielded positive results. The remainder either found no change or negative change. In her summary statement, Donaldson makes clear that *structured experience* and *equality* are critical components in bringing about positive change in attitudes. From the results of the meta-analysis, it became evident that contact with people who have disabilities *may* be a positive influence for change under some conditions, but the studies Donaldson reports have not been based on theory. This makes it difficult to generalize results beyond the scope of each study. Donaldson's quote implies that *quality* of contact is more important than *quantity* of contact. Even short-term interventions can be effective when structured intentionally. While there are other methods of bringing about attitude change that do not include direct contact with people who have disabilities, when

direct contact is the desired mechanism, Contact Theory outlines the conditions that are most likely to result in positive outcomes.

Contact Theory

Contact Theory explores how groups of people perceive each other, develop expectations and attitudes, and resist change in that comfortable structure. Any examination of the origins of contact theory begins with Gordon W. Allport. His book, *The Nature of Prejudice* (1954), is written about prejudice and discrimination based on race, religion, gender, and socioeconomic status. He concludes that we are all "fettered to our respective cultures and that we are all bundles of prejudice" (p. 4). After arriving at the conclusion that all people have prejudicial tendencies, Allport began to research methods of restructuring attitudes that would decrease prejudice. He began with the premise that contact between groups could be a powerful tool and designed research to identify the conditions under which positive change would result.

To understand the origin of Contact Theory, it is helpful to place it in historical context. The era just preceding the 1950s witnessed racist factions in various cultures, even the United States, seeking justification of their ideas through science. The Nazi party in Germany contrived "scientific data" as justification for racism in the 1940s, spawning a world war and causing a "sea change in scientific thinking on 'race'" in the decade following WWII (Schaffer, 2007, p. 258). In the United States, the decade following the war included dialogue and debate surrounding the desegregation of the armed forces (Executive Order, January, 1948) and the American education system (Brown v. Board of Education, 1954). Racism was a concept demonized by government propaganda during WWII; something American soldiers fought to defeat in Europe and

Asia. Debate about civil rights and segregation laws applied the word "racist" to American culture and political policy which, in turn, advanced the political agenda toward a resolution of these apparent discrepancies.

Bramel (2004) reviewed the historical period during which Allport was writing and he concluded that there was a cultural assumption that may have been ignored by researchers using Contact Theory in later decades. During the 1950s, people immigrating to the United States were expected to assimilate into the new culture. The "melting pot" that created modern American culture has been widely documented. Allport's unstated assumption seemed to be that "most ethnic/national/racial groups were more culturally similar to each other than their members imagined" (Bramel, 2004, p. 49). This statement was perhaps the antithesis to the racism of the 1940s in which racial difference was justification for murder. Allport was writing about groups in America under the guise of "assumed similarity" and, therefore, the term "prejudice" was described as an *inaccurate* set of unpleasant characteristics that were *unfairly* assigned to a group and generalized to all individuals belonging to the group. Bramel claims that this crucial point about similarity was commonly overlooked when researchers applied contact theory (2004). The theory holds that structured contact can improve relations between groups that are fundamentally similar, but falsely judging each other.

This concept of false assumptions has implications for research about disability based on Allport's idea of "assumed similarity" because a person with a disability has been historically seen as different. A medical examination may be able to validate the notion that people with disabilities are "fundamentally different" from others based on the dysfunction of muscles or changes in anatomy. Gill (2001) acknowledged the

connection to Allport's premise when she declared, "In contrast to race and gender, negative ascriptions based on disability can be superficially linked to 'real' human differences" (p. 365). It is interesting that she described physical function and/or anatomical appearance as a stronger determinant of "difference" than even racial characteristics. That supposition of "different functioning" sets the process of prejudice into motion and overrides any sense of commonality. Gill accepts that the process is occurring, but rejects the basis for it, just as Allport did. She concludes that the argument of "difference based on disability" is superficial. Since people with disability are treated with prejudice by the society from which they derive, the attitudes about disability cannot be based on racial or genetic differences, but based on inaccurate attributions of "difference" based on how a person accomplishes a given task. The stigma associated with disability fits the description of "inaccurate and unfair" and that premise makes the negative attitudes amenable to change through Contact Theory as formulated by Allport.

Researchers began to speculate about the outcome of contact between groups "long before there was research to guide them in their inquiry" (Pettigrew & Tropp, 2005, p. 262). During the nineteenth century, social Darwinism dominated the dialogue, with the expectation that contact would lead to conflict. This view was based on the idea of cultural superiority and domination. In the twentieth century, the emerging discipline of social psychology began to gather empirical research on the notion of contact between groups (Hewstone, 1986). Research indicated that contact could improve relations between groups or exacerbate negative attitudes (Bargal, 1996; Pettigrew & Tropp, 2005). These results then beg the question, "What type of contact leads to a positive outcome?"

Allport identified situations that led to a worsening of group relations and he also identified four "positive factors" that, when present, would result in reduced prejudice. First, unstructured, casual social contact did not improve negative feelings, but actually made prejudice worse. Any time paths crossed superficially, the feelings of ire were simply brought to attention with no rebuttal or re-formation. Allport went on to conclude that "the more casual and unstructured the contact is between groups, the worse the prejudice" (1954, p. 263). The reason casual contact may actually increase prejudice is that every time a member of an out-group is seen in a social situation, it is natural for all the in-group humor, hearsay, tradition, and stereotypes to come to mind. When this occurs, the review of in-group dogma intensifies the adverse mental associations. Further, in-group members are cued to watch for and interpret the out-group member's behavior in a way that confirms the stereotyped position held by the in-group (Paluck, 2006). Clearly then, intergroup contact must be managed wisely, or it can have "deleterious unintended effects" (Allport, 1954, p. 265). Link and Phelan (2001) offered one explanation for why these conditions allow negative thoughts to persist. They state that casual contact is unchallenging and requires no re-organization of automatic and familiar thought processes. For efficiency of social interaction, there is a tendency to keep our thoughts at the automated level. This decreases anxiety and allows us to do less critical thinking and analysis of the situation. There is no information requiring us to enter into cognition, which would ultimately necessitate a greater investment of mental energy. Once the conditions or processes that had a negative result were identified, researchers began to formulate the "positive factors" that would lead to a reduction in prejudice. The initial factors were the following: (a) equal status between the groups, (b)

common goals, (c) intergroup cooperation, and (d) the support of authorities, law or custom (Pettigrew & Tropp, 2005, p. 264). These conditions allow for "true acquaintance" to occur between individuals in group settings. Such "goodwill contact" can be arranged in many social spheres (Allport, 1954), one of which is acknowledged to be recreation. What began as the "contact hypothesis" eventually became Contact Theory, and was changed or improved in minor ways by Allport and others such as Pettigrew (1998). Bramel calls Contact Theory "One of the most long-lived and successful ideas in the history of social psychology" (Bramel, 2004, p. 49). Contact Theory succinctly states that negative attitudes about a minority group will be reduced when contact between two groups is designed and executed in a specific manner (see Figure 2) (Allport, 1954).

Contact Theory, as it emerged from research, states that four conditions must be met in order to promote lasting change in attitudes. Any of the four conditions left to stand alone would be inefficacious and any combination less than the whole would decrease the likelihood of lasting change. As seen in Figure 1, each of the groups or contact members must share equal status in the interaction. There are many ways to interpret "status" because it can be applied to economics, power, or even physical size, height, or sex. Another principle indicates there must be some common goal that provides structure to the situation and that both groups can identify as a worthwhile purpose. This effect is enhanced if the groups need to cooperatively depend on each other to attain that goal. The next principle states that the interaction must have positive

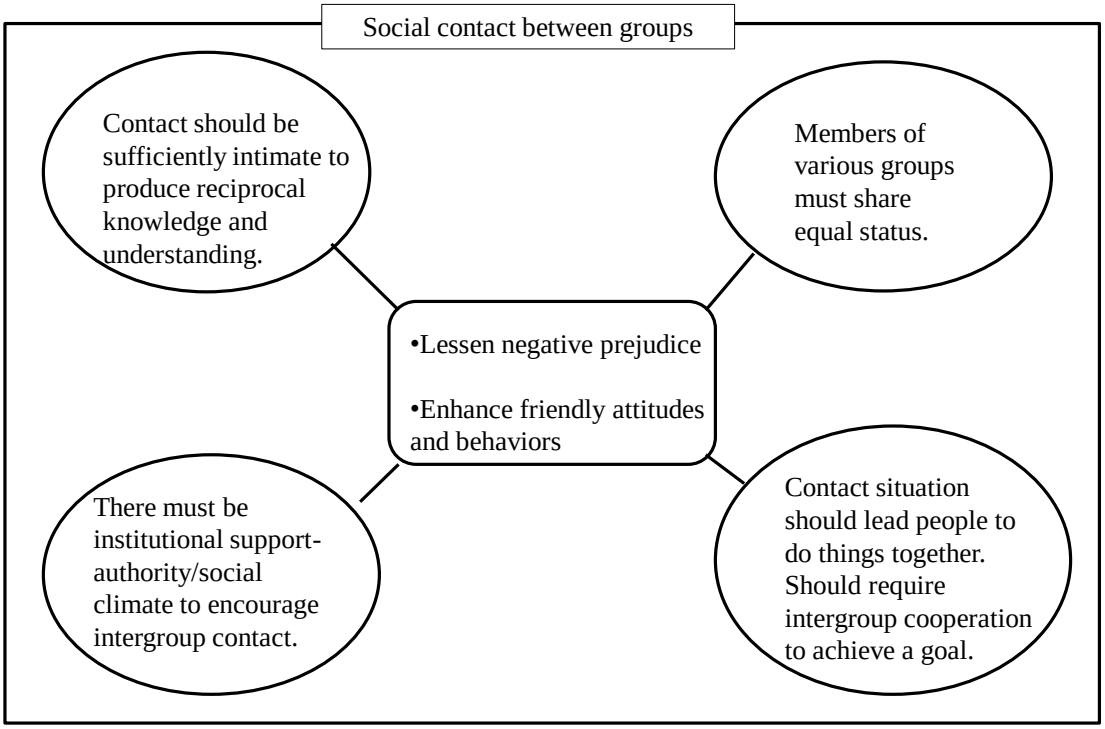


Figure 1. Diagram of Social Contact Theory, illustrating the components that lead to improved attitudes between groups of people. Adapted from Corky Sarvis, (http://www.dir.state.tx.us/sacc/uthscdiversity.htm)

support from institutions, authorities, laws, or customs. This means that there must be "sanction" from some higher authority. In some ways, this sanction lets the groups "stand down," save face, and pass the blame for participation in the situation. The last principle maintains that the contact must be of an intimate nature, such that knowledge is shared and understanding can take place. During this sharing, the fundamental assumption of contact theory comes to the fore: People are more alike than they realize. Through intimate rather than casual contact, these realizations can be discovered. In summary, if these four conditions are met, participants may be able to find a common humanity across groups.

Allport (1954) recommended that structured activities also be supplemented by information. This information should be geared toward correcting inaccurate stereotypes. After some testing of Contact Theory, Allport arrived at the following admission: "It is [not] clear whether the knowledge causes friendliness, or whether friendliness invites the acquiring of knowledge" (p. 269). The variations in types and methods involved in tests of Contact Theory may make this question difficult to answer. There is research that heavily favors the acquisition of knowledge, and there is research that promotes development of friendship, but in either case, they may be using Contact Theory as a guide. There is no conflict in the results, only a caution about attributing causality when measuring change in attitudes. In Allport's conception, knowledge must come from direct experience, as illustrated in Figure 2, and also from creditable information sources such as the sanctioning body. The "friendliness" that he identifies is seen as the outcome of well-organized activities that intentionally include the four elements of Contact Theory and encompasses the idea of decreasing prejudice.

There are other general factors that affect the success of programs based on Contact Theory and should be considered by those using this theory in a social setting. The quantitative aspects of the intergroup contact should be considered, such as duration, frequency, and the number of persons involved in the activities (Slininger, 2000). Under the correct structural elements illustrated in Figure 2, the greater duration of time and/or frequency of an intervention enhance the effectiveness of the contact. Conversely, the larger the groups, the less likely there will be intimate sharing of knowledge and experience. The social atmosphere should also be considered, for example, the artificiality of the activity or the degree to which it feels contrived or transparent in intent.

When participants feel that they are being "manipulated," they are less likely to fully engage in the cooperative activity. If this happens, then the theory loses a crucial element of change and will decrease in effectiveness. If the participant feels resentment or contempt toward the organizers, cooperative engagement is also weakened, resulting in a loss of effectiveness. Another general factor is whether the participants are involved voluntarily or involuntarily. Sanction is meant to provide approval and encouragement rather than simply being forced, which may produce resistance in the minds of the participants. Contact can be inhibited or enhanced to a certain degree by considering the quantitative aspects brought into focus by Slininger.

The interdisciplinary nature of social research has led certain authors to place emphasis on particular pieces of Contact Theory which they felt were more critical to success. As an example, Forbes (1997) concentrated on the importance of direct, meaningful communication. He believed removing barriers to *effective* communication would result in decreased stereotyping, allowing people to substitute realistic views in place of fear and, if the theory holds, friendship would result. To illustrate how removing barriers can foster this effective communication, Forbes (1997) offers his own clarification of Allport's principles. First, in order for the groups to communicate, the power structures must be more or less equal or the groups will maintain separateness. Second, the use of common objectives will aid communication because contact that leads people to *do* things together is more likely to result in changed attitudes. Third, such contact will increase in power if sanctioned by some body or institution. These interpretations are not drastic changes from the original theory, but the emphasis is subtly changed by Forbes to focus on communication. All change is wrought through quality

communication and the principles mentioned in the theory become structure to support this one overarching necessity. The mechanism of change is the communication—all other considerations are meant to see that this can take place. Other factors in the model support communication by removing the barriers that are typically in place in social dialogue (fear, anxiety, stereotypes) and are known to prevent effective communication.

It is important to note that Contact Theory outlines conditions necessary for positive change, but adhering to the conditions may not be sufficient for change to take place. Some people choose not to allow any threat to their personal beliefs or new information to change their mind. Some attitudes are deeply rooted and personal. People with strong opinions will resist any effort to change their beliefs and attitudes. Appropriate contact is simply a factor that *may* reduce the effect of other factors, such as beliefs. According to Allport, the contact is a situational variable. The personal variable may be deeply ingrained in a person, and may not be susceptible to change. He goes on to say that Contact Theory will be effective with a group of "ordinary people with a normal degree of prejudice" (Allport, 1954, p. 281).

Updating Contact Theory

Since the time of Allport's research, various authors have revised, criticized, or elaborated on Contact Theory. Pettigrew has written extensively about Contact Theory throughout his career and, in 1998, he undertook the challenge of making some revisions for the Annual Review of Psychology. He identifies four problem areas associated with the theory. The first is that of *causal sequence*. People who are willing to engage in intergroup activities are self-selecting and have less prejudice than people who simply refuse to engage in such activities. If this is allowed to happen in the research design,

then the opposite causal sequence could be happening, which implies that people with low prejudice willingly join in contact activities, rather than contact activities causing a reduction in prejudice. It is important to use designs that limit the choice of participants and emphasizes random assignment.

The second area of concern was the list of *independent variables*. Over time, the list of conditions specified for Contact Theory to work continued to grow, including common language, voluntary contact, initial views about each other, and stereotype disconfirmation. It would be rare for a research design to include all such factors, and yet, research that did not include all factors consistently showed positive results. Pettigrew determined that all of the new variables were better described as *facilitating* conditions rather than *essential* conditions.

The third area of consideration was that Contact Theory never described the *processes of change*. The original theory included conditions under which change should occur, but it did not undertake to explain how or why such changes occurred. The fourth area of examination had to do with the *generalization of effects*. The original theory did not make clear how contact with individuals would generalize to other situations, to other members of the group not present, and to other outgroups uninvolved in the contact situation.

Once Pettigrew identified the weaknesses in Contact Theory, he systematically addressed the four main concerns that had perhaps arisen in the minds of others. He discounted the first threat of *causal sequence,* claiming it was a clear question of methodology. The self-selection bias could be controlled by the experimental design in terms of random assignment and limiting the opportunities for choice. He also

discounted the *additional independent variables*, emphasizing the original essential conditions of contact designated by Allport. This left two remaining criticisms—that of unspecified change processes and generalization of the effects.

Since Allport did not specify how contact facilitated change in the minds of participants, Pettigrew outlined four *processes of change* that describe how contact decreases prejudice. The processes are described as learning about the outgroup, changing behavior, generating affective ties, and intergroup reappraisal. When learning about another group, it is important to consider the context in which the information is presented. In Allport's original design, this was thought to be the major route to attitude change. Pettigrew concluded that information alone is not likely to produce change, but information is almost never presented alone; thus, the effect is in combination with other factors. Providing accurate information is still the first process, but only in a chain linked to the following three, which promote assimilation and learning.

The second process is associated with behavioral modification. Pettigrew thought there was value in requiring people to set aside patterned or accepted behaviors, even temporarily, because "behavior is often a precursor of attitude change" (Pettigrew, 1998, p. 71). If expectations of the contact situation require members to alter their behavior, even in a benign way, then dissonance is created between behavior and attitude. The temporary change in behavior creates a cognitive dissonance. The individual can reduce the dissonance by revising his/her attitudes. Repetition of the behavior can result in a potential for "liking" when new behaviors are consistently rewarded.

Creating affective ties is the third process of change and it reflects the importance of emotion in intergroup contact. Positive emotions resulting from optimally-designed

contact can lead to empathy, which can impact attitudes about an entire group of people. These feelings of connectedness may be stimulated by reliance on each other for the duration of a goal-based activity.

The fourth and last process of change is intergroup reappraisal. When old ways of seeing and interpreting the world are seen as flawed or less useful, then ingroup perspective can change and be reshaped by the newly defined relation to the outgroup. When people find their own way is not the only way, a step toward deprovincialization has taken place. This is seen as opening a door for outgroup contact. These processes of change describe the how and why of contact theory. The original theory specified that contact was the method of change. Pettigrew thought that was too simplistic. He identified four processes of change that make contact theory work and claims that they may overlap and interact in complex ways (Pettigrew, 1998).

The last of the four areas of criticism Pettigrew entertained in his Annual Review (1998) regarded *generalization of effects*. Generalization can occur on three levels. The first potential for generalizing is across situations, outside the "intentionally" structured interaction. Pettigrew determines that generalization will be greater with repeated "optimal" exposures or intergroup contacts. The second area of generalization is from individual to the group. For this to occur, it is best that the individuals see themselves as "members" of his/her referent group. During the contact, those boundaries must be relaxed somewhat. The cooperative engagement in an activity can then give creation and purpose to a new, temporary group. This allows a new categorization to emerge in which all members belong to a larger conception of common-ness. Once people are thinking of the new group goal (the cooperative endeavor principle stated in the original theory),

Pettigrew says that a recategorization then takes place in which there is a "we-ness" being developed and there is less emphasis on "us" and "them" boundaries. The third and last area of generalization is from one outgroup to other, noninvolved outgroups. Pettigrew finds this proposition has only been lightly studied but indications are that having a more open attitude about one outgroup allows a greater degree of openness and acceptance of others that are seen as different based on any number of attributes (Pettigrew, 1998, p. 75).

After clarifying the existing theory, Pettigrew "reformulates" the theory by adding the concept of time. Time itself is not the factor promoting change; the real factor is cross-group friendship, but developing close relationships through constructive contact takes time (Figure 3). Thus, Pettigrew adds one last essential condition to the original four conditions posited by Allport. The idea that friendship-building requires time is axiomatic to the revised Contact Theory, sometimes called Intergroup Contact Theory. When friendship is added to the original four principles of contact theory, "striking results can then be achieved" (Pettigrew, 1998, p. 76). Many contact situations are, by necessity, short-term or single-exposure interventions. According to Pettigrew's model, the best result that can be hoped for, with only a single contact experience, is a decategorization of old stereotypes (see Figure 2).

More research is needed to assess what types of activities can compress the initial resistance and anxiety, moving forward in the model toward generalization of attitude. As mentioned, the groups most often referenced in tests of contact theory revolved around racial and ethnic boundaries. The negative emotions addressed by contact theory are typically called prejudice. When contact theory is used to guide interactions between

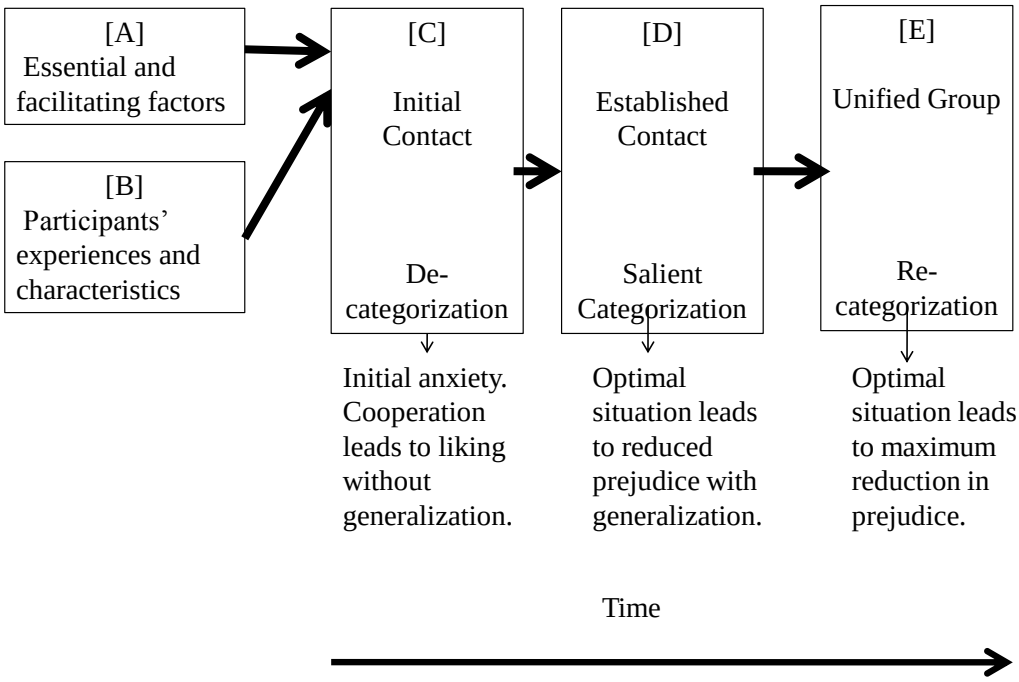


Figure 2. Diagram of Contact Theory as it was Updated by Pettigrew in 1998. This model illustrates that time is an essential factor in improving attitudes among groups.

people with disabilities and those without, this language seems unfamiliar. The dialogue surrounding physical abilities and differences more typically centers on the word "stigma" and research dating back to Goffman (1963) is consistent in this regard. Phelan, Link, and Dovidio (2008) examined the literature and the conceptual models associated with both stigma and prejudice in order to clarify how the two lines of research may or may not be related.

Resolving the Concepts of Prejudice and Stigma

Stigma and prejudice are both characterized as negative attitudes based on inaccurate assumptions and stereotypes. Goffman (1963) writes about stigma. The

literature surrounding Contact Theory, written by Allport, revolves around prejudice. Any definition of these words today relates in part back to these foundational authors because each is credited for beginning the dialogue in the discourse of that literature (Phelan et al., 2008). There is no uniformity of agreement in regard to the concept of stigma because "stigma is a concept of interdisciplinary interest that includes psychologists, sociologists, anthropologists, political scientists, and social geographers" (Link & Phelan, 2001, p. 365). The relationship of prejudice to stigma is also a point of contention. Authors such as Thornicroft, Rose, Kassam, and Sartorius (2007) conceived of stigma as consisting of three components (see Figure 3) that are based in knowledge, attitudes, and behaviors. The attitudes component was labeled "prejudice." Thus, prejudice is a filter that leads to stigma (Thornicroft et al., 2007).

Other authors have conceptualized stigma differently. Link and Phelan (2001) suggested their own model for stigma that did not include the concept of prejudice (see Figure 4), but later came back to revisit the concepts, perhaps due to discussion initiated by Thornicroft et al. (2007), in an attempt to reconcile these constructs for use in future social research. They are careful to side with Goffman in that stigma resides in the relation between an attribute or "mark" and a social stereotype. Their model also includes the visual representation of "power," which is an essential element in the one-sided nature of stigma. Finally, Phelan et al. (2008) undertook a meta-analysis of 18 key models that illustrated stigma and prejudice. They concluded that "stigma and prejudice are indeed 'one animal' and should be treated as such" (2008, p. 365).

They acknowledge that the reason the two terms came to preeminence, each in its own sphere, was because stigma research was being applied to areas of disease and

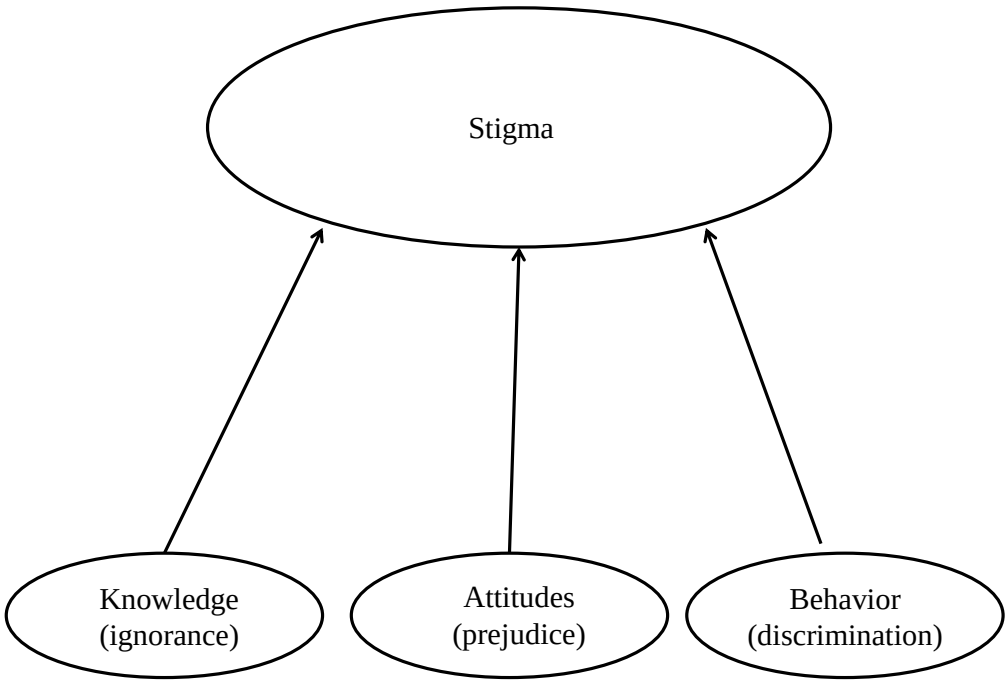


Figure 3. Diagram Showing the Components of Stigma as Conceived by Thornicroft, Rose, Kassan, and Sartorius, 2007.

disability, whereas prejudice research was mainly about race. There were overlaps in certain models, and the authors "encourage scholars to reach across stigma/prejudice lines when searching for theory, methods and empirical findings to guide their new endeavors" (p. 365). While they essentially unified the concepts of prejudice and stigma, they did acknowledge three subtypes of the new metaconcept (see Figure 5).

These subtypes are important to understand because they acknowledge the same processes being used for different purposes. While retaining their older conceptualization of the components of stigma, they move the discourse forward by delineating a typology that is defined by the motivation for the development and maintenance of the

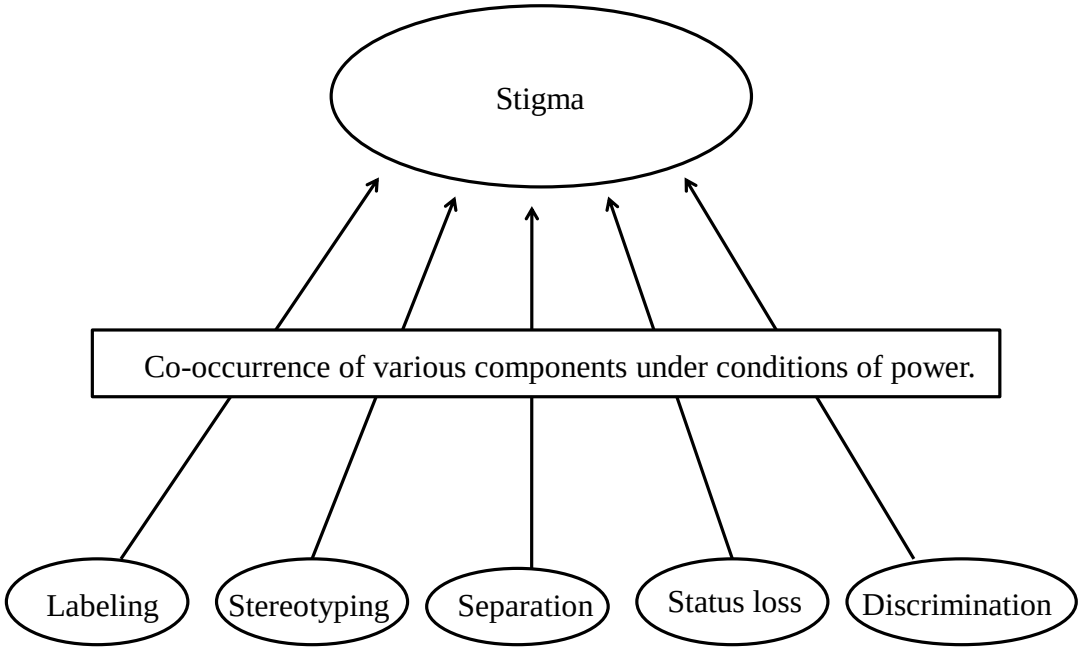


Figure 4. Stigma and Power, as it was originally modeled by Link and Phelan, 2001. The element of power is illustrated here as in other models where unequal status is a crucial element to the construction of stigma.

stigma/prejudice processes. The model illustrated that the idea of stigmatizing a race was to keep people oppressed and enable exploitation of that group of people. The authors called that action, "keeping people down." The stigmatizing of deviant behaviors and deviant identities was to keep people acting in accordance with group norms and alienate any that violated those established norms. The value to society was in increased conformity with social norms, which is summarized as "keeping people in." The stigmatizing of disability and disease was set in place in order to keep such people separated from society. They call this idea "disease avoidance" and it is based on ensuring survival and success of the group, which has roots in evolutionary psychology

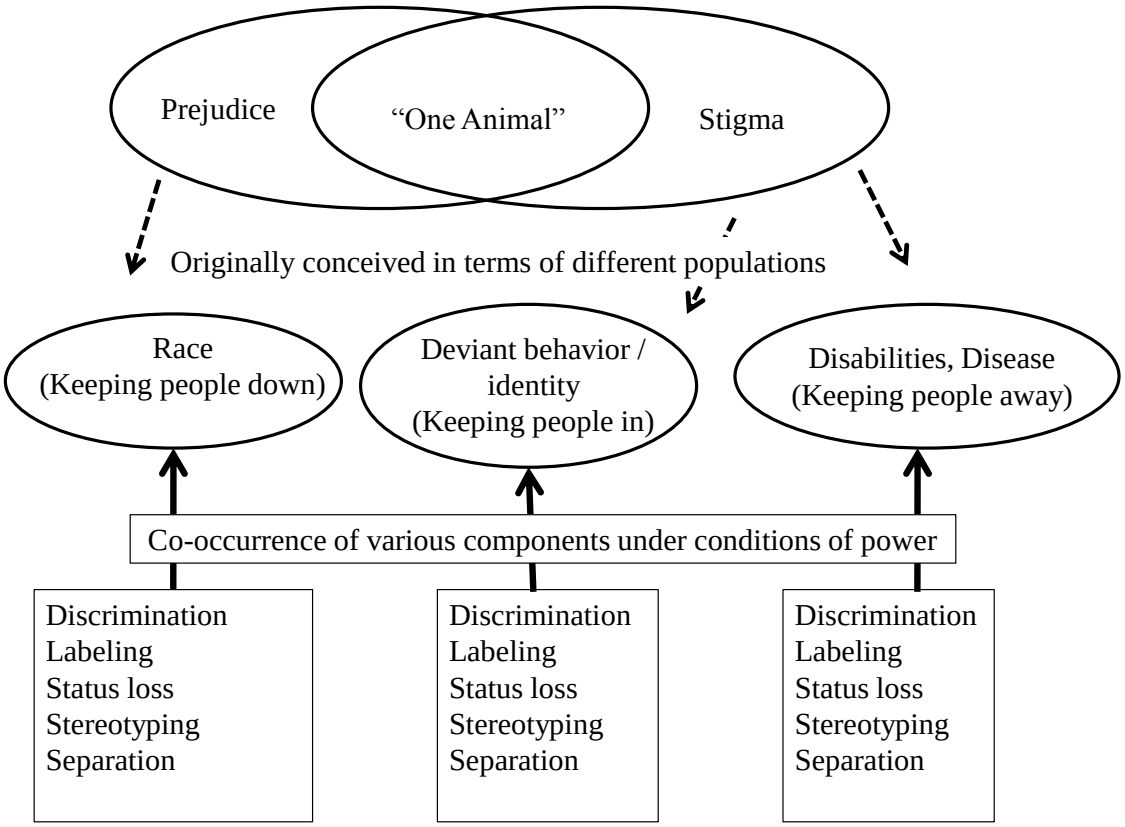


Figure 5. Stigma and Prejudice Are Now Thought to Be "One Animal." To move forward, both terms must now merge in the research literature.

(Phelan et al., 2008). The action here is summarized as "keeping people away." After creating a new model in which stigma and prejudice are thought to be the same concept, they do not advocate creating a new term for use going forward. They state that stigma should be used to refer to the broad processes of devaluing a specific outgroup for a specific social purpose. In all cases, the process of enacting and maintaining stigma and prejudice based on some characteristic, once selected, involves categorization, labeling, stereotyping, negative emotions, interactional discomfort, social rejection, status loss, and other harmful effects on the lives of those targeted.

Contact Theory Applied to Disability

Among a wider body of research on groups separated by attributes of ethnicity and race, Contact Theory has also been used to investigate negative attitudes about people with disabilities. Perhaps the most important foundational concept of this theory, going back to Allport's initial premise, is that of "nondifference." When a researcher chooses this theory he/she must accept that initial step in the logic of the investigation. Any attempts to use physical function as a way to establish "real difference" are not seen as valid. Negative stereotypes and attributions about disability must in reality be "inaccurate" and unfair." Although the theory is based on nondifference, there is an abundance of evidence that society does establish different-ness based on disability status. This makes Contact Theory a prime mechanism to guide interaction between a person with limited understanding or experience with disability and those who view disability as ubiquitous to the "human experience." The structured contact may then allow people who have no understanding of disability to interpret the "other" in a new light and discover same-ness.

Examples from Research

Yuker and Block (1986) reviewed 274 research studies guided by Contact Theory and focused on changing attitudes about disability. They synthesized common results and presented additional considerations when using Contact Theory in the field of disability research. Many research designs involving disability are characterized by a slight modification from the standard model of "groups" interacting with one another. In disability research, it is typical to use a single "presenter" or single contact point that embodies and represents the concept "disability" rather than a group. The characteristics

of this person matter insofar as they are representing a group. He/she represents the disability type he or she belongs to (sensory, motor, intellectual), and he or she also represents other disabilities as a general category. While the argument was presented that disability constitutes a "culture" like ethnic cultures, there is, at the same time, diversity of experience and opinion within the group. For people in power, all people with disability may be "one culture." That same inference dominated American conceptualizations of Native Americans during the nineteenth century, but it was shown to be inaccurate. People with disabilities may find commonality across certain dimensions, but retain specific emotional connections such as people who collectively call themselves "polios" or the Deaf. It is important to note that different types of disability have differing levels of stigma or esteem. These differences become salient only in context of a discussion about generalization of the effects of contact.

Generality versus Specificity

The attitudes about disability types and related stigma are multifaceted. They are influenced by many factors (Gething, 1991). Bullock and Mahon's (1997) research indicates that people with psychological disorders experience the "greatest prejudice from both the general public and recreation service providers" (p. 236). In a model where a single person with a disability represents the whole conceptual range of disability, that contact person adds an additional dimension to the model of Contact Theory. Focusing on one type of disability, for example, people who use assistance devices such as wheelchairs, may not have an influence among a different population like intellectual disability or developmental delay. There is little research about generalization, which will eventually be needed to answer the question, "Can improvement in attitude about

one group generalize to other disability types?" During the development of the Interaction with Disabled Persons Scale, Gething (1991) tested the scale with a general concept of disability and then administered parallel forms that were disability specific. She concludes, "The structure of attitudes towards a variety of disabling conditions is organised primarily by attitudinal dimension rather than by type of condition" (p. 62). Gething takes the results of her scale development exercise as mandate to "provide intervention strategies which aim to educate the community about a restricted number of disabilities in order to promote positive attitude change towards disabled people in general" (p. 62).

Population

The professionals who decide to work in rehabilitation settings encounter individuals with various types of acquired injuries or impairments. Some conditions are related to trauma and others are simply biological processes based on disease or genetics. The clinicians or therapists assigned to assist in the transitional phase of healthcare have a difficult job because they represent the individual with a new disability to society at large and at the same time, they present society with all of its nuanced attitudes back to the individual. They are to expect and support the best possible outcomes and recovery achievable by their patients, and yet accept the potential permanent limitations of each individual's biology. At the same time, the clinician must act as a go-between of sorts. He or she must represent the public to the patient and the patient to the public. A delicate and sensitive manner in doing so is what makes a professional of high regard. If clinical staff are unaware of their own cultural attitudes, such as paternalism or general rejection, they will be ineffective in forming a therapeutic relationship with a client based on his or

her individual uniqueness. In other cases, therapists may harbor resentment toward patients when success is not measured against initial therapeutic goals. The education and preparation of healthcare professionals may include opportunities to self-examine and change negative attitudes about disability status. Which type of lecture, workshop, experience or exposure will be effective in producing self-awareness of such attitudes along with a compatible format to reintegrate new attitudes in the minds of professionals? The use of theory to guide interaction can be tested in research settings and then implemented across multiple settings such as education practice, inservice education, and continuing education units. In order to provide efficacious experiences to professionals in various career paths, the present study will use Contact Theory as a guide while comparing two disability-awareness workshops among undergraduates in recreation, physical therapy, and occupational therapy.

The healthcare professional has a responsibility to examine the level of stigma he or she portrays and look at the social underpinnings of these attitudes in order to be a better professional, to impact service delivery among people with disabilities, and advocate for change and acceptance in society at large. Therefore, the following hypotheses will be tested to evaluate the nature of attitudes among future professionals and the efficacy of Contact Theory as a mechanism of attitude change.

Hypotheses

H1: Stigmatizing attitudes, measured by the Multidimensional Attitudes Scale (MAS) towards persons with disabilities, will be lower among participants in the didactic workshop than those in the control group.

H2: Stigmatizing attitudes, measured by the Multidimensional Attitudes Scale (MAS) towards persons with disabilities, will be lower among participants in the experiential workshop than those in the control group.

H3: Stigmatizing attitudes, measured by the Multidimensional Attitudes Scale (MAS) towards persons with disabilities, will be lower among participants in the experiential workshop than those in the didactic workshop.

H4: There will be an interaction between college major and treatment type, which will be evidenced by stigmatizing attitudes, measured by the Multidimensional Attitudes Scale (MAS) towards persons with disabilities.

CHAPTER III

METHODS

The purpose of this study was to test the effects of two types of disability awareness training workshops on the level of stigmatizing attitudes harbored among future healthcare professionals. The workshops were structured around the tenets of Contact Theory. This chapter describes the settings, participants, design, measurement, procedures, and data analysis.

Settings

Students enrolled in healthcare-oriented majors (Therapeutic Recreation, Physical Therapy, and Occupational Therapy) at a large Western university participated in one of two workshops or a control group that took place on campus. Both workshops were themed to decrease the level of stigmatizing attitudes about physical disability and were guided by principles of Contact Theory. In one workshop, the approach was mainly didactic instruction and was comprised of lecture and discussion that took place in a classroom. The principle investigator of this study acted as the presenter of information through slides, video clips, role play, and discussion. In the experiential workshop, the two "coaches" who facilitated the experience were actual wheelchair basketball players. Each gave a short personal introduction that included an overview of his injury, lifestyle, and disability. The coaches then introduced the game of wheelchair basketball with

appropriate rules and skills demonstrations. The students played wheelchair basketball for approximately 1 hour as the mechanism of interaction. The player-coaches were actively teaching on the court and interacting with the participants throughout the scrimmage. At the conclusion of the intersquad scrimmage, each coach commented about the value of sports as a therapeutic modality and how sport has enriched their lives at a personal level.

Participants

The study included 82 participants who were enrolled in three college majors. Each participant was assigned to one of three treatment groups. At the end of the treatment, the participants responded to a written questionnaire which yielded 41 data points and one open-ended question about his or her personal experience with people who have disabilities. Thirty-four of the questions consisted of the Multidimensional Attitudes Scale (MAS) towards persons with disabilities. Added to the MAS were seven questions designed to assess the presence of factors associated with Contact Theory.

All students from the occupational therapy (n = 25) and physical therapy (n = 28) majors were recruited from one shared course in neuro-anatomy. All recreation students (n = 29) were from two classes in the Department of Parks, Recreation and Tourism. In each case, the instructors of the class introduced the principal investigator and gave verbal support for the project to establish departmental sanction of the study. The students in these majors had previously chosen to be involved in a helping profession, and they were the targeted population of the study. Students were given the choice to engage in the study anonymously, in order to avoid any negative academic consequences, and only those who volunteered were considered for participation in the study. It was

necessary to hold two workshops, rather than one, which interfered with the systematic random assignment to the treatment groups by major. The first treatment session included random assignment to only the sport and education group. The second treatment session allowed only random assignment to the education and control groups. A third data gathering session was also necessary to balance the number of participants in the control group.

Design

A 3 X 3 factorial design was used to measure the presence of stigmatizing attitudes toward disability. Since a pool of 90 students was not available for testing on the same day, the treatment sessions were conducted on two separate occasions. On the first day of testing, students representing three different majors were stratified by major into three groups. Once stratified to maintain adequate representation, the students were then randomly assigned to one of two experiment groups. The first group was assigned to participate in the experiential workshop and the second group was assigned to the didactic workshop experience. On the second day of testing, students were randomly assigned to the didactic workshop or to the control group. Some students who did not show up for participation in the control group were tested at a third time in order to maintain the integrity of the research design although that decision carried with it an increased threat to validity. The baseline data obtained from the control group were then compared with the attitudes among the remaining 60 students who were tested after completing either of the two workshop formats (see Table 2). In the workshops, the principles of Contact Theory were implemented as a guide for the interventions.

Table 2

Experiment Design

	Recreation Major MAS score	Occupational Therapy MAS score	Physical Therapy MAS score
Control Group			
Didactic Workshop			
Experiential Workshop			

In each treatment group, there was direct contact with a person who experiences disability. Table 3 illustrates which components of Contact Theory were present in terms of the structure (but not content) of each workshop setting/treatment group.

The didactic workshop represented information delivered in an intimate setting by a person with a disability with authoritative sanction of the event. The sanction was given by the instructors of the classes from which students were selected.
Each faculty member agreed to provide such verbal/departmental sanction at the time of recruitment by introducing the principal investigator and discussing professional preparation to associate with people who have disabilities.

Table 3

Workshop Comparison

	Cooperation/goal oriented	Authoritative sanction	Equal status	Intimate nature
Didactic Workshop		**X**		**X**
Experiential Workshop	**X**	**X**	**X**	**X**

The guise of "department research" about academic practices provided a reasonable context of sanction and approval by authority. Both treatment groups featured contact that was "intimate in nature." Due to the small size of the group, the participants were engaged in dialogue with the group leaders. In the didactic workshop, the discussion included role-play and reflective exercises that contributed to the interaction and represented intimate communications. The presenters' representation of disability in person also contributed to the authentic nature of the interaction. Contact with a person who experiences disability is seen as an essential element in the workshop setting as it was formulated by the National Rehabilitation Hospital (NRH) in Washington, DC. The topics of discussion were a modified form of an awareness program developed at NRH. The developers of the program assert that the staff of any rehabilitation unit tends to see patients during the acute transition phase when medical needs are the highest priority. They tend to have little or no contact with people who are re-engaged in life, have few true medical needs, and are fulfilling multiple life roles.

While informational workshops are very practical for clinical staff, the exposure is missing crucial elements of Contact Theory. In the NRH model, the former patient is seen as a consumer of healthcare services from the professional who is educated, which does nothing to equalize status. The other missing element is cooperating in an activity for the sake of common goal or purpose. In order to accommodate the last two elements of Contact Theory, it may be necessary to leave the lecture hall, and find a new pattern of engagement that is active and experiential. While some may see the activity as less "educational," Contact Theory suggests that learning is enhanced under such conditions rather than deterred.

The experiential workshop represented information disseminated through an experiential activity that included sanction prior to the event, began with intimate contact, and moved toward cooperative engagement under equalized conditions. In this workshop, all of the principles of Contact Theory were represented. Due to the nature of sport, the "cooperative" play element created a "team" with a common purpose to play well or to beat the other team. Each team was led by a player-coach who was on the floor participating and coaching his team during play. The second principle was that of authoritative sanction. The promotion and sanction of the workshop by the instructors of the respective classes remained the same for both treatment conditions. The "equal status" concept was represented in the experiential workshop by placing all members in wheelchairs allowing an equality of physical stature or height. There is a great deal of difference in being seated in a lecture hall, being the same height as a presenter using a wheelchair, compared to being engaged in an activity and using wheelchairs to play and move about from place to place without returning to standing and walking. The status element is a difficult one to interpret and implement in terms of physical disability. Status could be interpreted in other ways such as education, marital status, age, income, etc. While it was not possible to make status exactly *equal*, the idea was to equalize as many perceptions as possible so that the person with a disability was not seen as having lower status, which is a common situation based on negative attitudes discussed in Chapter II.

At first, participants felt inept at wheelchair mobility as compared to the coach. The experiential nature of pushing the wheelchair facilitated a rapid growth curve of skill development. Rather than expressing frustration about their inabilities, students were

eager to get past mobility drills and move on to "playing basketball." Intimate communication was the last principle implemented in the sports workshop. To enhance the feeling of intimacy, the play began with an introduction by both coaches wherein they told a bit of personal history regarding how they were injured and ended up using a wheelchair. Each emphasized that life quickly resumed a normal pattern that included activities such as driving, dating, and pursuing an education. This intimate sharing of life experience set a tone for students to connect with their coach for the day of wheelchair sports participation.

Measurement

Stigmatizing attitudes were measured through the use of the Multidimensional Attitudes Scale (MAS) towards persons with disabilities. Findler et al. (2007) developed this new scale in response to criticism that existing scales were unidimensional in nature and did not capture the multidimensional qualities of an attitude. The authors began the development of the instrument with a pilot study after which they eliminated 32 questions from the pool that were repetitive or had low factor loadings. After the pilot study, the revised instrument was field-tested using a sample of 132 individuals. The instrument at that time consisted of a pared down 47 items. Through principle component factor analysis of the 47 items, they made further reductions that resulted in a questionnaire with just 34 items.

During the factor analysis procedure, the authors also confirmed the presence of three dimensions of attitude that were represented by separate subscales in the questionnaire. According to Findler et al. (2007) these different components must be measured for an accurate representation of an attitude about disability. The affective

component of an attitude is based on the emotion aroused in the subject as he or she responds to the referent object. In this case, the referent object is a person with a visible disability. The affective subscale of the MAS was measured using 16 questions and yielded a Cronbach's alpha of .90. The cognitive component of an attitude is situated in the thought processes and belief patterns established over time due to beliefs, knowledge, and socialization processes. There were 10 questions on the cognitive subscale of the MAS and the Cronbach's alpha was reported as .88. The behavior component of an attitude is captured in the actions that might be pursued in the given situation. The MAS measured behavior using 8 questions and this subscale was found to have a Cronbach's alpha of .83. Correlations between the subscales ranged from .23 to .41, indicating a common core, but each representing a distinct dimension (Findler et al., 2007). Even though the core responses of the subscales are mildly correlated, the expression of more negative attitudes on one dimension is easily captured. To demonstrate that the questions along each dimension captured something different, the authors performed three paired *t*-tests to compare the means of the three components. Each test yielded significant results: t(affects—cognitions) = 5.59, $df = 130$, $\alpha < .01$; t(affects—behaviors) = 5.73, $df = 130$, $\alpha < .01$; and t(cognitions—behaviors) = 5.73, $df = 130$, $\alpha < .01$. Based on these findings, it appears that the MAS is a tool that should be put into practice as an assessment of attitudes toward people with disabilities.

Because the attitudes of interest are those expressed in social situations, the questionnaire began with an introductory vignette that reads:

> Imagine the following situation. Joseph/Michelle went out for lunch with some friends to a coffee shop. A man/woman in a wheelchair, with whom Joseph/Michelle is not acquainted, enters the coffee shop and joins the group. Joseph/Michelle is introduced to this person, and shortly thereafter, everyone else

> leaves, with only Joseph/Michelle and the man/woman in the wheelchair remaining alone together at the table. Joseph/Michelle has 15 minutes to wait for his/her ride. Try to imagine the situation.

After reading this vignette, the respondent is asked for responses along the three dimensions described above. The first is the *affect subscale,* which consists of 16 words that represent emotions. The instructions given to the respondent for this specific section read:

> People experience a variety of *emotions* when they are involved in such a situation. Following is a list of possible emotions, which may arise before, during, and/or after such a situation. Please rate on each line the likelihood that this *emotion* might arise in Joseph/Michelle.

The response set is organized as a 5-point Likert scale with the header "degree of likelihood." The response matrix allows a range from 1 (Not at all) to 5 (Very Much). Examples of the words representing emotions are nervousness, relaxation, serenity, shame, shyness, pity, and stress.

The next section of the questionnaire is labeled the *cognitions subscale*. There are 10 questions dealing with the thought processes of the person in a hypothetical situation. It begins with the instruction:

> People experience a variety of *cognitions* when they are involved in such a situation. Following is a list of possible thoughts that may arise before, during, and/or after such a situation. Please rate on each line the likelihood that this *cognition* might arise in Joseph/Michelle.

The response matrix is organized around the same 5-point Likert style system in the first section. Examples from this section include:

- He/she seems to be an interesting guy/girl.
- We may get along really well.
- I can make him/her feel more comfortable.
- He/she will enjoy getting to know me.

The last section of the instrument is labeled the *behaviors subscale*. It consists of eight questions that represent behavior options for the person to choose in the hypothetical meeting of an individual in a wheelchair. The instructions for this section read:

> People experience a variety of *behaviors* when they are involved in such a situation. Following is a list of possible behaviors that may arise before, during, and/or after such a situation. Please rate on each line the likelihood that Joseph/Michelle would *behave* in the following manner.

The response matrix is the same 5-point Likert scale as in the previous section. Examples of behavior options presented in this section are:

- Get up and leave.
- Initiate a conversation.
- Move away.
- Continue what he/she was doing.

When the three subscale scores are summed, the result is a multidimensional representation of an attitude about disability. The mean score on the MAS served as the dependent variable and was examined across both workshop design and selected college major.

Procedures

Students who participated in the study were stratified into groups based on college major. Since the groups were somewhat small, the stratification of groups by major ensured adequate representation in each of the three experimental groups. After stratification, the students representing each strata were randomly assigned to one of the three experiment groups. This step was done twice to accommodate the small numbers of participants available on a given Saturday morning. Members of one group were administered the Multidimensional Attitudes Scale (MAS) questionnaire to assess their

levels of stigmatizing attitudes about disability. This information served as a control group that established a baseline measure of attitudes among students who will become future healthcare professionals.

Another group of students participated in a didactic workshop that examined the nature of disability in context of a medical/social model. The workshop was adapted from an inservice-oriented workshop presented by the National Rehabilitation Hospital (NRH) in Washington, DC titled, "Defining 'Disability': Moving beyond the Medical Model" (for actual slides, see Appendix A). The NRH developed the workshop in order to improve the delivery of health care services provided by their organization. Interacting with former patients in a nonmedical setting was designed to provide a "personal touch" that helped staff to see a more holistic view of disability. Health care interactions may be the only time staff members are exposed to issues and questions from a person with a disability. Though people with disabilities undeniably have health care needs just like any other person, they typically do not see their disability in medical terms (The Consumer Professional Partnership Program, 2004). After attending the workshop, the NRH has found that staff members are able to see disability as more than a set of health problems or limitations. Health professionals may begin to de-center disability from the individual where disability is a personal health problem to the community where disability is seen as a social problem resulting from lack of services and accommodations that prevent full inclusion and participation in society. The curriculum designed by this well-respected rehabilitation center was modified for the purposes of this research. In the NRH model, the format is more lecture-based with only limited interaction when a "person with a disability" plays a part in the curriculum. As reformulated, the entire

workshop was hosted by a person with a disability, included role-play opportunities, and involved more examples of cultural attitudes about disability that encouraged the participant to examine the roots of negative attitudes in his or her own belief system.

As with the NRH model, the facilitator presented information that discussed disability from the individual/medical model that "privatizes" the experience of and adaptation to disability. Then the presenter moved toward an exploration of disability that decenters the experience from the person and illustrates disability as primarily a social phenomenon that is "constructed" around people with impairments. The presenter introduced People First language as a paradigm that is designed to give all people equality, dignity, and respect. This was contrasted with the contemporary idea of "politically correct" language patterns. Following the workshop, the participants completed the same MAS questionnaire as the control group to assess their level of stigmatizing attitudes which they assign to people with disabilities that result in the use of a wheelchair.

The last group of participants was assigned to the experiential workshop in which they played wheelchair basketball. The facilitators of this experience were both local wheelchair basketball players from the Utah Wheelin' Jazz team that competes in the National Wheelchair Basketball Association (NWBA). Two of the team members acted as player-coaches.

Coach A was injured at age 15. He experienced a spinal cord injury in a motor vehicle crash resulting in T-10 complete paraplegia. The level of paralysis has required the use of a wheelchair for all personal mobility during the ensuing 17 years. He is now employed full time, and is married with one child. Coach A completed a Bachelor's

Degree from the University of Utah. He has been playing wheelchair basketball for more than 10 years and in 2006, he was honored as an All Star for the NWBA.

Coach B was injured at age 21 while riding a motorcycle. During a crash, he experienced a spinal cord injury resulting in T-6 complete paraplegia. After completing his associate's degree, he went to work full time. Playing wheelchair basketball has been one of many ways for Coach B to express his interest in sports. He is active in coaching youth with disabilities and regularly mentors others in snow skiing through the National Ability Center in Park City, UT.

After a short introduction of their personal experience with disability and sports, the coaches demonstrated skills and engaged the participants in drills to increase their mobility using a wheelchair. The participants learned the rules of the game and then the two teams played each other in a scrimmage. The coaches were on the floor playing with their team members and instructing them during the game. Following the game, there was a short wrap-up by the coaches and then the participants were administered the same MAS questionnaire to assess their level of stigmatizing attitudes assigned to people with disabilities. This workshop format was a test of all four principles of Contact Theory and the results were compared with the didactic workshop setting where only two of the conditions were met.

Data Analysis

Data were analyzed using SPSS software to examine descriptive statistics and hypothesis testing. Using factorial analysis of variance (ANOVA) allowed for testing of main effects and interaction effects among the two independent variables. Use of the ANOVA test of significance is based on the following assumptions: independence of

cases, the data are normally distributed, and there is equality of variance among the groups. These assumptions were tested during exploration of the dependent variables. All data cleaning exercises were completed prior to entering the data in the General Linear Model function of SPSS. After testing for interaction among the independent variables, main effects were also tested using the omnibus *F* test for significance using analysis of variance. Initial ANOVA results were followed by post-hoc tests (Tukey, Scheffe) to reveal which groups were different while correcting for alpha inflation.

The MAS itself was also tested to measure how well the scale performed as a whole and in subscales. The overall Cronbach's alpha score for the scale was .92. The alpha for the affective subscale was the highest at .89. Even though the cognitive subscale was the lowest at .85, it compared very favorably with the behavior subscale at .86. The scale items seemed to be relating well to each other and the data gathered seemed appropriate for hypothesis testing.

Threats to Validity

True experimental design is regarded as the highest level of design available to researchers and it provides the greatest measure of control, thus resulting in the greatest validity. Due to the type of constructs of interest, it is "not always possible to use experimental design in the social sciences" (Kerlinger & Lee, 2000, p. 277). Where a rigorous experimental design is not readily achievable, the quasi-experimental design can also indicate relations between two variables. The design may be less robust, but the research is valid to the extent that the controls and weaknesses are understood. The manipulation of an independent variable can still be measured. The relations between the independent variable and dependent variable can still be demonstrated by statistical

identification of significant differences between treatment groups. In order to attribute the difference to the actual treatment, there must be internal and external controls in place. Without these controls, there could be "alternative explanations" that could account for the observed difference in scores (Kerlinger & Lee, 2000). The internal and external threats to validity, and the extent to which they were controlled in the present study, are represented in Tables 4 and 5.

Table 4

Threats to Internal Validity

Threat	Controlled	Justification
History	No	Test given on three occasions.
Maturation	Yes	Any maturation effect should be consistent across participants.
Testing	Yes	There is no pretest; not longitudinal.
Instrumentation	Yes	No pretest; the instrument did not change. No human observers were used.
Statistical regression	Yes	There is no pretest; change scores are not calculated.
Selection biases	Partially	Random assignment of targeted participants to treatment groups was modified.
Attrition	Yes	Test given only once; not longitudinal.
Interaction with selection	Partially	Self-selected participants were randomly assigned in first two treatment sessions.
Diffusion of treatment	Yes	No participant interaction

Table 5

Threats to External Validity

Threat	Controlled	Justification
Personological variable and treatment interaction	Yes	No pretest.
Failure to explicitly describe independent variables	Partially	Contact-theory alludes to "status" which is a very difficult social concept. Attempts to equalize status are investigational.
Multiple treatment interference	Yes	No prior treatment; all participants participate in one group only.
Reactive effects	Partially	Short term treatment, two hour workshops.
Pretest sensitization	Yes	No pretest was given.
Experimenter effect	No	The two intervention groups will be led by different people with disabilities.

CHAPTER IV

RESULTS

The purpose of this study was to examine the effect of two disability awareness training models on stigmatizing attitudes among future healthcare professionals. Two interventions were designed to modify participants' attitudes in a structured setting. One setting was a didactic workshop and the other was an experiential workshop wherein the participants played wheelchair basketball. The data gathered from these two groups were compared against data obtained from a control group. This chapter reports the results of the analysis of data collected from college students from three different majors. Descriptive information about the sample is provided and is followed by the results of hypothesis testing. The chapter concludes with manipulation checks.

Descriptive

Data were entered into SPSS for cleaning and screening (which identified three missing values) and to explore the characteristics of the sample. Due to the small number of subjects in each group, the missing data points were imputed by calculating the mean for that participant on the particular subscale from which that point was missing. This procedure allowed for all 82 cases to be included in the data analysis. Following data entry and screening procedures, negative questions were recoded so that higher scores indicated greater levels of stigma. On the affective subscale, three emotion words

(relaxation, serenity, calmness) were recoded so that positive values would be inverted. The other 15 emotion words were all negative states and agreement with them was scored so as to indicate higher levels of stigma. All 10 of the questions on the cognition subscale required recoding because they were worded as positive thought processes. Examples of positive statements from this section include; "He/she looks like an OK person" and "We may get along really well." Lastly, on the behavior subscale, items seven and eight were recoded as these items are, once again, positive in nature: "Initiate a conversation if he/she doesn't make the first move" and "Start a conversation." In total, 15 items were positively worded and needed to be inverted in value so that agreement would indicate less stigmatizing attitudes.

The level of prior experience and exposure among the undergraduate students participating in the study varied greatly. For example, all students in occupational and physical therapy are required to gain experience working in clinical settings outside of the classroom, and some had already been involved in such activity. Some students encountered people who have disabilities in these settings, but the contact was of the type discussed previously, characterized by a natural hierarchy of helper and helpee. The educational benefit of such contact is not questioned here, but the amount of personal experience the individuals in the study have with people who have disabilities could represent a contaminating variable. Other than educational exposure, simple friendship relationships with people or, perhaps, family members who have physical disabilities could also represent a threat to the validity of the results. Random assignment was intended to distribute the effects of this threat evenly among the groups. The open-ended qualitative question at the end of the questionnaire (Please briefly describe any previous

experience or close association you have had with people who experience disabilities) was used to assess the distribution of this variable among the treatment groups and across college major.

Some descriptive statistics were used to determine if the level of prior experience interacting with people who have disabilities functioned as a confounding variable in the data set. The questionnaire allowed participants to report varying levels of previous exposure to people with disabilities in an open-ended, qualitative format. The data were then coded into three levels of experience and are presented in Table 6. The first category consisted of individuals reporting no prior contact at all. The second category denoted those with contact limited to educational/clinical settings. The third category represented contact characterized by close friendships or those with family members who experience disability. Overall, the students in the recreation major had less exposure to people who experience some type of disability. Perhaps the association with people who experience health challenges is one factor that predisposes young people to choose the more clinical professions of occupational or physical therapy. The higher level of familiarity (close friends or family members with disability) could potentially mask the levels of stigma in the data when analyzing by either independent variable. This level of exposure was reported by only 28% of the participants. The higher percentage of students with previous exposure to disability for occupational and physical therapy students may simply be reflective of the educational curriculum. By the second year, nearly all students have participated in a clinical experience and that often includes meeting people with disabilities. There is no such requirement in the recreation major which may explain the imbalance in the “no experience” category.

Table 6

Participants with Prior Exposure to Disability by Major

	No prior experience	Educational exposure	Friendship/family
Major			
OT (25)	2	12	11
PT (28)	7	17	4
Rec. (29)	14	7	8

The influence of this confounding variable was also analyzed across treatment groups. For example, scores in any one treatment group could be skewed or influenced unduly by high numbers of participants from the "friendship/family" category. Years of association in noneducational, nonclinical settings could result in very low stigma scores because the associations in public settings listed on the MAS would be very familiar to participants with that particular history. Under those conditions, the likelihood of a type II error would increase and invalidate the experimental design. An examination of how the exposure variable was represented across treatment groups is seen in Table 7. While the distribution is not perfect, the type of exposure is not grossly imbalanced by treatment group, with the highest value being found in the didactic workshop setting where (40%) were already familiar with the nature of disability. Because both of the treatment groups had greater prior exposure than the control group, which could potentially decrease the level of stigma being reported among those two groups, the risk of a type I error is elevated, and results must be interpreted with caution.

Table 8 displays the analysis of the dependent variable, MAS score across the two independent variables of college major and treatment group. The exposure variable is then added as a third variable exerting influence on the dependent variable. (Higher MAS scores represent higher levels of stigma toward people with disabilities.)

Table 7

Participants with Prior Exposure to Disability by Treatment Group

	No prior experience	Educational exposure	Friendship/ family
Tx Group			
Sport (27)	6	15	6
Education (27)	3	13	11
Control (28)	14	8	6

Students in the recreation major reported the highest mean score (2.56 on a 5-point scale) and the greatest standard deviation (n = 29, SD = .58). That group was followed by students in occupational therapy, with a mean score of 2.49 (n = 25, SD = .47). Physical therapy students scored the lowest on the MAS with a mean of 2.36 (n = 28, SD = .50). The table also displays the MAS scores across treatment groups. Those attending the didactic group had the highest mean score and also the highest standard deviation in the scores (M = 2.70, SD = .64) compared with the control group (M = 2.43, SD = .34) and the experiential group (M = 2.30, SD = .49). Although the data set is not complete, the largest standard deviations are found among those who report some personal connection to others who experience disability through family and/or friendship. In contrast, the least variation, or smallest standard deviations, occurred among those individuals who had the least exposure toward people with disabilities. These results indicate that exposure allows for wide ranging attitudes about disability and does not predispose people to think only positively about people who experience disabilities whereas no exposure seemingly leaves one subject to the social messages and stereotypes discussed in Chapter II, which are predominantly negative.

Table 8

Means by College Major and Treatment Group by Exposure to Disability

	Total by College Major	Control Group	Didactic Group	Experiential Group
	Mean/*SD*	Mean/*SD*	Mean/*SD*	Mean/*SD*
College Major				
Occupational Therapy	2.49/.47	2.58/.30	2.53/.65	2.35/.52
No exposure		2.76/.12	*	*
Educational exp.		2.70/.13	2.81/.72	2.19/.27
Family/friend		2.37/.38	2.31/.59	2.51/.69
Physical Therapy	2.36/.50	2.28/.36	2.52/.68	2.27/.40
No exposure		2.32/.48	3.53/**	2.51/.27
Educational exp.		2.25/.30	2.57/.56	2.20/.43
Family/friend		*	2.08/.67	*
Recreation	2.56/.58	2.41/.33	2.99/.56	2.28/.58
No exposure		2.43/.35	2.82/.37	2.32/.69
Educational exp.		*	3.62/**	2.25/.57
Family/friend		2.23/**	2.99/.68	2.25/.67
Total by Treatment Group		2.43/.34	2.70/.64	2.30/.49

* No data available for this cell **Single data point

Hypothesis Tests

The first step was to test for an interaction effect between the independent variables of college major and treatment group. Hypothesis 4 predicted there would be an interaction taking place between the two independent variables. This was tested using the General Linear Model in SPSS, which indicated that there was no interaction taking place between the two independent variables of college major and treatment group. The Wilk's Lambda test of interaction yielded an *F* score of .86, and a *p* value of .59.

After finding no significant interaction, the main effects of the independent variables were tested. Univariate analysis of variance tests indicated there was a significant effect by treatment group ($F(2,81) = 3.91$, $p = .02$) but not by college major ($F(2,81) = 1.18$, $p = .31$). Post hoc comparisons were conducted using Tukey ($p = .013$) and Bonferroni ($p = .014$) methods for control of alpha inflation. Results indicated that the mean of the experiential treatment group ($M = 2.30$, $SD = .49$) was significantly different from the mean of the didactic treatment group ($M = 2.70$, $SD = .64$). The effect size was found to be in the medium range (Cohen's $d = .70$, $r = .33$). The experiential group mean was not different from the control group mean ($p = .61$) and the didactic group mean did not differ from the control group mean ($p = .13$).

Hypotheses 1 through 3 predicted the effect of the treatment groups. Hypothesis 1 predicted that the participants in the didactic group would score lower on the MAS than those in the control group, and was not supported by the data. The didactic group scored significantly higher (more stigmatizing) than the control group. Hypothesis 2 predicted that the mean score from the experiential group would be lower than the mean score found in the control group. The data revealed that the scores in the experiential group were lower, but not significantly, so the hypothesis was rejected. Hypothesis 3 predicted that the experiential group would have lower mean scores than the didactic group. This hypothesis was supported by the data: The experiential group scored significantly lower than the didactic group. While this hypothesis was supported by the data, when placed in context, these results are confusing because the control group established a baseline and the experiential intervention did not produce results that deviated from the baseline. Rather than stating that the experiential intervention lowered MAS scores, it may be more

accurate to state that the didactic group exhibited an effect, which *increased* MAS scores. The purpose of the control group is to infer what attitudes exist in the population without any treatment. Thus, with equal scores, the experiential treatment did not decrease stigmatizing attitudes. The only difference from the control group that can be attributed to a treatment effect is the raising of stigmatizing scores among those in the didactic treatment group. Higher scores on the MAS indicate more negative or stigmatizing attitudes. The interpretation of this unanticipated result will be attempted in Chapter 5.

Exploratory

The two workshops accommodated different styles of learning and this may have influenced the scores at the level of the subscales of the MAS. The didactic instruction group was based on cognitive processes of discussion, role play, and debate. The participants were thoroughly engaged in the discussion, but only minimal attempts were made to draw them in emotionally through such activities as role-play. The method of information delivery favored the cognitive viewing of a situational problem and may have influenced the scores on the cognitive subscale of the MAS simply due to setting and style of information delivery. The scores on the cognitive subscale, however, comparing the didactic and experiential workshops, were not significantly different (t[52] = -1.01, p = .32).

The same dichotomy of learning styles may have influenced scores in the experiential group where the participants played wheelchair basketball and had very little exposure to any structured discussion about stigmatizing attitudes in the society in which they live. The experiential group may have fostered a very emotional reaction triggered by fun and competition, but failed to increase knowledge or cognitions about disability.

When scores from the two groups were tested on the affective subscale, the data revealed that the scores were significantly different ($t[52] = -2.87$, $p < .01$). The participants in the experiential learning group did express less stigmatizing attitudes when measured only on the affective subscale, which measures emotion. This may be a reflection of the learning style or it may also be an indicator of more personal, emotional responses about disability rather than parts of an attitude that are less personal and more socially-based.

Although the MAS is designed to be a multidimensional measure of an attitude, correlations between the subscales revealed interesting exploratory data. There was a strong correlation between the affective and behavioral subscales ($r = .68$, $p = <.01$), but the correlation of the cognitive subscale with both the affective ($r = .40$, $p = <.01$) and behavioral ($r = .39$, $p = <.01$) subscales was weaker in strength. This result was consistent with data presented by the original scale developers in that the cognitive subscale exhibited weaker correlations with affect and behavior. The authors claimed that the cognitive subscale was measuring a very specific part of an attitude not captured by the affective or behavioral subscales and added a missing dimension to the multidimensional assessment of an attitude (Findler et al., 2007). The characteristics of the subscales and what they purport to measure may be important in regard to the design of the experimental manipulation of attitudes. Further tests may substantiate connections between learning styles and a specific subscale, such as the difference in the affective subscale of this study, which would have practical application in experiment design.

Manipulation Check

The attitude questionnaire included a number of questions designed to assess the presence of the conditions specified by Contact Theory. Participants responded to Likert-

type questions with a response set of 1 (Not at all) to 5 (Very much) stating the extent to which the treatment session was goal oriented, cooperative in nature, sanctioned by authority, intimate, and if they shared equal status with the presenter. Responses were compared using an independent samples *t*-test, which found no difference in the means (see Table 9) between the two interventions except on the dimension of "cooperative form of engagement."

The design of the experiential treatment group was intended to represent all aspects of Contact Theory, and the mean scores indicate that the conditions were, in fact, met in the basketball setting. The didactic workshop was only intended to include two of the four principles (intimate setting and sanction), but the scores indicated that the participants also felt they shared equal status with the presenter and that the workshop itself was goal-oriented. This result was not anticipated, and indicates a compromise of the experimental design. Under these circumstances, Contact Theory would predict very little difference in the two treatment group outcomes. The results of the manipulation check questions allow a discussion of effective workshop design, but are quite limited in terms of a

Table 9

Manipulation Check Means by Group

	Goal Oriented	Cooperative Engagement	Sanction	Intimate Communication	Equal Status
Treatment Group					
Experiential Workshop	4.37	4.85*	4.44	4.22	4.80
Didactic Workshop	4.40	4.40*	4.07	4.25	4.66

*$t(52) = 3.41$, $p < .01$

discussion about the comparative effectiveness of the components of Contact Theory.

The hypotheses tested during data analysis are summarized in Table 10. As previously noted, the acceptance of hypothesis 3 is subject to scrutiny because the positive outcome is useful only as it guides further research.

This chapter has reported the descriptive statistics associated with the quasi-experiment conducted to modify attitudes about disability among future healthcare professionals. Tests of the research hypotheses were reported. Validity checks regarding the experimental design were also evaluated for effectiveness. The conclusions and interpretation of the data analysis presented in this chapter can be found in Chapter V.

Table 10

Summary of Hypotheses Stated as Alternates

Hypotheses	Results
H1: Stigmatizing attitudes, measured by the Multidimensional Attitudes Scale (MAS) towards persons with disabilities, will be lower among participants in the didactic workshop than the control group.	Reject
H2: Stigmatizing attitudes, measured by the Multidimensional Attitudes Scale (MAS) towards persons with disabilities, will be lower among participants in the experiential workshop than the control group.	Reject
H3: Stigmatizing attitudes, measured by the Multidimensional Attitudes Scale (MAS) towards persons with disabilities, will be lower among participants in the experiential workshop than those in the didactic workshop.	Accept
H4: There will be an interaction between college major and treatment type which will be evidenced by stigmatizing attitudes, measured by the Multidimensional Attitudes Scale (MAS) towards persons with disabilities.	Reject

CHAPTER V

DISCUSSION

The purpose of this study was to examine the effect of two disability awareness training workshops on stigmatizing attitudes among future healthcare professionals. The results of this study indicate that attitudes about disability are malleable under certain circumstances. Contact Theory has been used in various populations to guide the process of attitude change. The "initial contact" between groups must be intentional and structured in order to avoid negative consequences associated with casual social contact. This study compared the efficacy of two models of structured intervention, based on Contact Theory, on stigmatizing attitudes regarding the concept of disability.

Study Overview

Stigmatizing attitudes are a major social problem for people training to become healthcare professionals, for people who have visible physical disabilities, and for society in general. As part of the curricula, future healthcare professionals are typically educated about disability through lectures and clinical exposure in the form of "rotations" or internships. As a result of feedback from actual patients who were dissatisfied with their experience in the healthcare system, facilities such as the National Rehabilitation Hospital (NRH) in Washington, DC began implementing new programs to decrease the negative attitudes and behaviors that sometimes characterize interactions between staff

and patients (Scullion, 1999). To address this identified deficiency, the NRH instituted an inservice training workshop that included "consumer" exposure. Even the use of the word "consumer" is a significant shift away from language such as "patient," and is a patent acknowledgement that people with disabilities should not be regarded as patients based solely on the fact that they may have long-standing or permanent health issues. It would be inappropriate to call a volunteer a patient when he or she came to the hospital to participate in a staff training session exploring attitudes about disability. Referring to a resident of the community who has a disability as patient or by his or her diagnosis (e.g., paraplegic) is an example of one of the negative attitudes being confronted by the NRH program. Stigmatizing attitudes also have a devaluing effect on people who are identified as "different." The vast majority of people with disabilities are "unable to conquer the formidable physical and social obstacles that confront them, and they live in the penumbra of society, condemned to lives as outsiders" (Murphy, 1987, p. 95). One such social obstacle is the strain that accompanies even the most mundane conversational contact that occurs as a person with a disability participates in daily life activities (Siller, 1967, 1968). There is also a high cost to society when entire groups of people are set aside and maintained as nonproductive citizens. Talents that might have been expressed in the workplace are nullified because of fear and discomfort, thus requiring society to compensate these individuals with entitlements. With social and governmental dis-incentives in place, society pays for a lifetime of supports or subsidies for those who experience permanent impairments.

Contact Theory can be a valuable resource to guide organizations contemplating using structured exposure between groups of professionals and clients to modify

attitudes. This study compared two methods for impacting stigmatizing attitudes about disability. One model was a didactic workshop that featured contact with a person with a disability. Rather than a cameo appearance of a "consumer" who could speak about disability from a personal perspective, this entire workshop was hosted by a person who experienced a disability. The alternate workshop format was based on experiential, goal-oriented participation intended to equalize status among participants. The activity designed and implemented to meet those criteria was wheelchair basketball. Although lasting attitude change may take more than one exposure, Contact Theory suggests that a well-organized contact situation can decrease anxiety and allow "decategorization," or an open minded appraisal, to take place regarding a stigmatized group.

Discussion of the Results

The data revealed support for only one of the research hypotheses. Hypothesis 1 predicted that negative attitudes would be lower among the didactic workshop group participants compared to the control group. The common practice of educating students about disability issues in a workshop setting has been effective in previous studies (Roper, 1990). This popular approach was altered slightly in this project by the use of a facilitator who experienced a disability and focused the workshop on social interaction rather than dissemination of medical facts. Hypothesis 1 was rejected because data indicated that the mean MAS score of the didactic workshop group (M = 2.70) was not significantly different from the mean score of the control group (M = 2.43). In this didactic setting, the presentation and discussion surrounding attitudes about disability did not yield lower negative attitude scores when compared to classmates who did not attend the workshop. This finding suggests that the style and content of the workshop must be

closely aligned with the objectives of the investigation and accurate measurement is critical in the development stage of workshop planning.

Hypothesis 2 predicted lower stigmatizing attitude scores among the students participating in the experiential workshop as compared to the control group. The experiential nature of playing a cooperative sport allowed participants to talk with and learn about people with disabilities in a structured way that was less formal, allowing participants to ask questions at any time without embarrassment or structural limitations. This hypothesis was also rejected. The difference between the mean score of the experiential group (M = 2.30) and the control group (M = 2.43) was not statistically significant.

Hypothesis 3 predicted that the students in the experiential workshop group would score lower on the MAS (exhibit less stigmatizing attitudes) compared to the didactic workshop group. This hypothesis was tentatively supported by the data: The mean score for the experiential group (M = 2.30) was indeed significantly lower than the score for the didactic group (M = 2.70). The interpretation of this result alone is misleading, however, because the treatment results were compared to the control group as well as each other. The control group scores established a baseline of attitudes among students from the three college majors. The experiential treatment group elicited lower scores than the didactic group, but the experiential group scores were not different from the control group. Neither treatment group produced scores that were significantly lower than the control group; the treatment group scores were only different when compared to each other. The investigation was designed to find effective ways to decrease stigmatizing attitudes about disability, and neither setting was efficacious in that regard because the

control group represented attitudes as they currently existed among the students prior to any treatment. The interventions did not produce scores that differed significantly from pre-intervention baseline. The results are, therefore, significant, but not meaningful. This result will be discussed in context of the pilot study data after presentation of each of the research hypotheses.

The last hypothesis predicted an interaction between the two independent variables of treatment group and college major. The data do not support an interaction effect among the two independent variables (see Figure 7). Testing of the main effects yielded one significant effect by treatment group, but this result is not useful or interpretable when placed in context of the control group data because intervention scores did not differ from the control group. The other main effect was college major. Each of the three majors selected for testing in this research study have a unique way of interpreting disability in a social context. The experimental design allowed for an investigation of how training and education associated with each profession influenced attitudes about disability. The hypothesis that groups would be different by college major was rejected because no significant effect of this variable was found in the data set. The students in each major had differing experiences, before and during their education, but their level of stigma was not shown to be different by scores on the MAS. This investigation did not attempt to explain whether exposure to disability issues prior to major selection or the educational practices presented in the major have been the greater contributor to attitudes about disability.

None of the research hypotheses were fully supported by the data. Although there were compromises in the execution of the experimental design and errors associated with

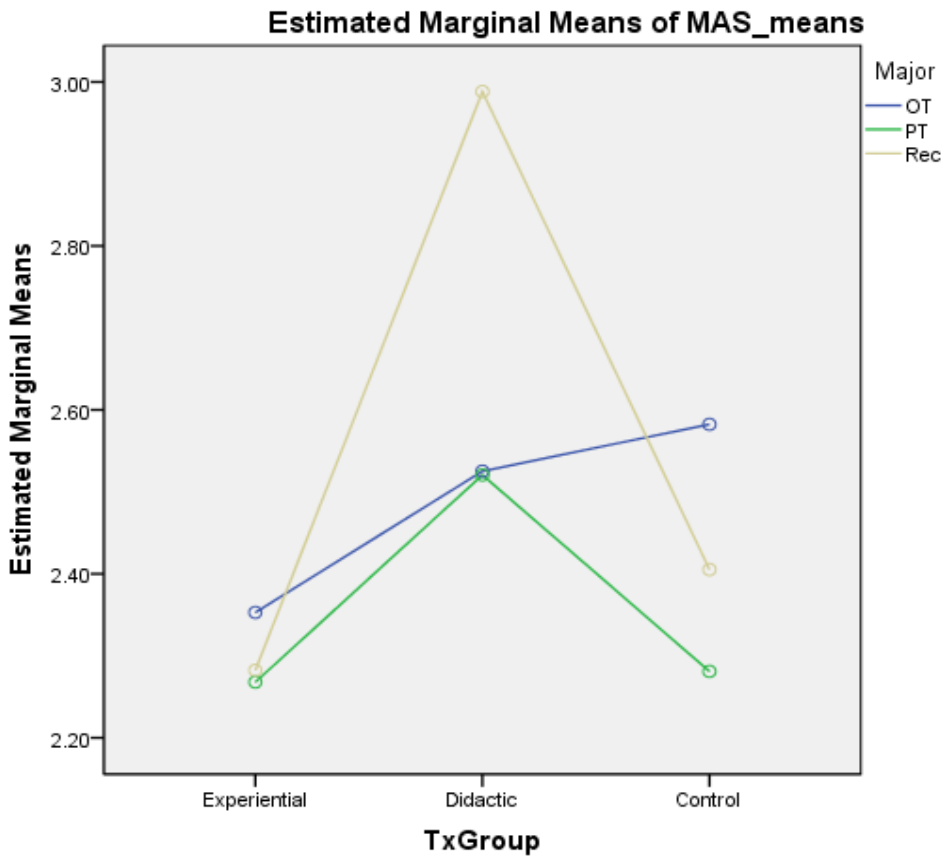


Figure 6. Interaction of Independent Variables.

the implementation of Contact Theory, the methodology that deserves the most scrutiny is the use of the MAS as a measure of attitudes.

Comparing the effectiveness of the two treatments hinged on being able to accurately measure the influence on the dependent variable. The MAS is a new instrument with little history to document its usefulness. The MAS revealed that the members of the didactic workshop had the most negative attitudes about disability, but this may not be a fair representation of reality. The results of pilot data also indicated some potential problems with using the MAS tool as a measure of personal rather than societal or situational attitudes about disability. In both uses of the MAS measure of attitudes, the group with the greatest level of education and exposure to social issues

scored the highest, or most stigmatizing. If this result is accurate, the organizers of training workshops must understand that educating caregivers may potentially increase negative attitudes toward those with whom they interact in healthcare settings. The instructions to the participants may need to be altered in order to increase representativeness of personal, internal attitudes about disability.

Pilot Test Data

Instructions for the MAS ask the participants to rate how likely it is for the emotions, cognitions, and behaviors listed to arise in the characters of a vignette that depicts a hypothetical social situation involving characters named Joseph or Michelle (see Appendix B). Participants are not directly asked how they themselves might feel in the social situation presented. This projection allows for a person to acknowledge social realities involving prejudice without specifically "owning" his or her own attitudes. This dichotomy may or may not interfere with the use of this tool as a representation of personal attitudes, but with limited use to date, it is simply unclear if this concern has merit.

To test the instrument's ability to differentiate students from differing educational backgrounds, a group of students majoring in recreation and just having completed a class titled Inclusive Recreation (with the principle investigator as the instructor) participated in a pilot test of the MAS during the last week of a semester-length class. During the semester, the students experienced a large number of contact hours with several people who experience disability. Class activities included service learning contact hours in the community in addition to guests in the classroom. Supplementing personal contact, the class included lecture and experiences designed to increase

awareness of social attitudes about disability. In addition to being exposed to media examples from film, advertising, and television, every student participated in role play activities that included a "simulated disability." Simulations have been criticized when the outcome is to learn "what it is like to live with a disability" when negotiating doors, ramps, curb cuts, drinking fountains, and bathrooms (Grayson & Marini, 1996). In this case, however, the purpose of the exercise was to arouse and observe instances of interaction strain during social contact. In essence, each class member, to varying degrees, felt stigma enacted toward him or her. Students have reported positive outcomes from these exercises through qualitative course-feedback forms. An anonymous student responded:

> While taking this course, I've learned that prejudices exist in my everyday life that I am oftentimes unaware of. I have become more aware of my surroundings. I feel that I have expanded my acceptance of others and learned to view those who are different than me as equals. I never knew that I had so many preconceived notions but I'm glad to have uncovered them and now I am slowly working to change them.

Due to the deliberate presentation of social issues including stigmatizing attitudes in the classroom setting, students completing this class were expected to have low levels of stigma about disability. The other group selected for the pilot test of the instrument was comprised of students in an accounting class in the business school who received no instruction about disability as part of their education. These students were expected to have higher stigmatizing attitudes due to a lack of curricular exposure about disability as a medical, social, or personal experience. Pilot test data were gathered from these two groups of students to see if the instrument was sensitive enough to find differences in attitudes about disability.

The results of the pilot test were unanticipated and diametrically opposed to the predicted pattern. Analysis of pilot test data indicated that recreation students with intensive exposure to disability-related issues scored higher on the MAS (M = 2.69, SD = .38) than the students in the business school (M = 2.30, SD = .35). The difference was significant (t[40] = 3.16, $p < .01$) and these results could guide follow-up research questions such as: "Do the students who were more familiar with social stigma score higher because of the increased awareness of the issues under consideration?"

Another data set was gathered to further explore the instrument during the pilot testing phase. These data were gathered from recreation students new to the program prior to taking the Inclusive Recreation class or any other class from the principal investigator of this study. In this data set, first-year recreation students scored higher (M = 2.42, SD = .51) than the business majors, and lower than the group of high-exposure recreation students. These results indicate that the tool itself can differentiate attitudes among various populations, but the results must be interpreted with caution. It is not clear from these data whether students are reporting personal feelings or inferring what is a typical response in our society, projected to be the response of Joseph or Michelle. The student who is more familiar with stigma may infer more negative attitude into their projections of the social situation presented in the MAS. The data do not support the direct interpretation that people with higher scores have higher levels of personal stigma toward people with disabilities. The counter-intuitive nature of these pilot study results are reprised in the data obtained from the workshop settings. Those who engaged in direct experience and/or discussion of social stigma scored higher on the MAS measure of stigmatizing attitudes. One strength of the didactic workshop was that the purpose of

the activities were front-loaded and made very clear at the outset. When adults are given clear learning objectives, they become active participants in the process of completing the outlined tasks.

Research indicates that adult learners benefit from specific learning methods. For example, teaching adults can be more effective when they are clearly informed of the learning objectives (Knowles, 1973; Levine, n.d.). The participants in the didactic workshop were told at the beginning that the workshop had four goals structured around disability awareness and was developed to meet the needs of practicing healthcare professionals. In contrast, the participants in the experiential workshop were only told that they would be learning about disability and people who experienced disability. There was no advanced disclosure about what they would be asked at the end of the activity. This difference may be in part responsible for the difference in scores, but it can only be a possible explanation if the MAS is potentially measuring awareness of social conditions and stigmatizing situations. This assertion will need more research to substantiate.

The investigation of correlation among the subscales may help inform the interpretation of the pilot test data. The cognitive scale is the least like the others and seems to capture the greatest range of responses from participants when compared with the affective or behavioral subscales. In several studies, the cognitive scale captured the highest scores or indications of stigmatizing attitudes. The cognitive understanding of disability placed in a social context is most enhanced by didactic instruction techniques that clearly display and interpret acts of prejudice. Such clear presentation of social examples in the context of the workshop discussion may have the unintended effect of

sensitizing the participants to "see" and acknowledge stigmatizing attitudes and, thus, influence scores for the worse as a way for participants to demonstrate competence and skill in seeing what the workshop presenters wanted them to see. This subscale anomaly will need to be explored using other methods in order to determine future applications of the MAS that would yield more meaningful results.

The main interest in this research study was to investigate how to influence attitudes about disability by using two different treatment workshops, each using different methods. The data did not yield results consistent with hypotheses regarding the treatment groups. The analysis indicated that the didactic workshop setting had the highest overall mean on the MAS scale and the participants in the experiential workshop had the lowest overall mean scores. However, neither of the treatment groups produced scores that were significantly different from the control group. The fact that the mean of the experiential group was significantly lower than the didactic group must be interpreted with caution because the didactic workshop result could be interpreted both as a failure (high levels of stigma) and a success (high levels of awareness). Definitive statements about the comparison of the efficacy of the treatment groups in shaping attitudes about disability (hypothesis 3) cannot be made without a more clear understanding of the way participants respond to the MAS vignette.

Limitations

There are several limitations impacting the interpretation and generalization of the results of this research. Despite the initial experimental design, one limitation associated with the execution of this study was the failure of random assignment to groups. This was due to limited access to the study population. It was important to sample students

from the same educational point of progress, but the cohort groups available from each of the three majors were quite small. This limitation required the addition of two secondary data gathering sessions, which introduced additional error associated with multiple events. The first session utilized random assignment to only the two workshops. The second treatment session utilized only random assignment to the didactic workshop and control groups. The third data gathering session did not use random assignment, but completed the control group design requirements for the experiment matrix.

A limitation imposed on the design was group size, which was restricted by the availability of eligible students. The 3 X 3 design necessitated nine independent groups and, with limited college enrollments, the groups could be no larger than 10. The small numbers in each group is a limitation because it allowed a greater threat from absences and contaminating variables such as prior exposure. Lastly, variations within majors such as recreation, where specialties range from therapeutic recreation to sport management, could skew responses or add unintended bias to the small samples. The same is also true for the other majors where specialization options abound.

Implications for Research and Practice

The results of this study contribute to the literature on disability in two ways. The first is the comparison of different interventions that might be implemented to engage students on the topic of disability. The two treatment workshops in this study were vastly different and the results may help guide future efforts in teaching college students who are preparing to become healthcare professionals. The second contribution is clarification between the measurement of personal attitudes about disability in contrast to

measuring a person's awareness of social attitudes and barriers faced by people who have disabilities.

Educational curricula can take many approaches to preparing future healthcare professionals to understand the concept of disability and the lived experience of people who have disabilities. In addition to the direct study of the body, students are frequently exposed to the social implications of disability. For example, students are sometimes invited to see the ramifications of using a wheelchair by traveling around campus for a day taking turns using a wheelchair for their own mobility. It is implied that the kinesthetic experience of "living the lifestyle" is of greater value than teaching that concept in a classroom. The use of such simulations may be effective at promoting an awareness of architecture and social attitudes, but the experience falls short of capturing what it is like to actually live with a disability. No experience can capture pain, for example, or the social status of being labeled as the "other." Each participant knows the temporary displacement and accompanying awkwardness will be over in a few hours and thus has little emotional threat to identity.

Not all simulated activities are based on negative consequences of disability. This study exposed students to the positive impact of wheelchair sports, as represented by high caliber athletes. Students were then afforded the chance to play the sport of wheelchair basketball and potentially see the wheelchair as a facilitating device rather than a limitation as in other community-based simulations. When confronted by heavy doors, uneven sidewalks, lack of curb cuts, the imagery is focused on the negative aspects of being a wheelchair user. In contrast, the results of this study indicate that the students who played wheelchair basketball enjoyed the activity. A limitation of this positive

presentation style of athletes and sport participation was that they did not see the immediate connection of their experience to personal or social attitudes about people who have disabilities. The students in the didactic workshop were told what they would be learning about and given multiple examples of negative attitudes and then encouraged to examine their own beliefs and stereotypes. Perhaps the recreation experience of "playing together" was less effective than anticipated because it lacked an overt and explicit agenda. The participants may have thought they were learning more about wheelchair sports than about people who experience disabilities or the society in which they live. An alternative explanation might be that the game was difficult, meaning that participants felt highly restricted or limited by the wheelchairs, and their attitudes reflected a poor appraisal of having to live with such a condition. Presenting clear objectives for the experiential learning activity may clarify its purpose in the minds of adult learners. Conversely, the role-play exercises available in a classroom setting, along with cueing for self-analysis, may be a better way to assess and influence attitudes about disability for adult college students.

The design of the two comparative treatments in this study yielded an important finding regarding the use of Contact Theory. Although the education-based workshop was only intended to capture two of the tenets of Contact Theory (intimate communication and authoritative sanction), participant responses on the manipulation check questions indicated that they regarded all four conditions to be met (see Table 11). The participants indicated they felt the workshop was goal-oriented, intimate in nature, sanctioned by authority, and that they were equal in status with the person with a disability. When researching Contact Theory, this researcher anticipated difficulty in

meeting the equal status element of the theory in a didactic instruction style workshop. Specifically, it was hypothesized that students would not feel equal in status with a presenter who had a disability in a didactic instructional setting because the natural boundary between instructor and participant would supplement and reinforce the boundary of differentness cast around disability. The responses indicate that researchers may choose experiential methods or didactic instructional methods but still retain the time-proven advantages of Contact Theory.

Contact Theory predicts greater influence on attitudes when certain principles guide the structure of the workshops. The planning for such workshops may include sanction by authority in student or professional settings. The communication can be made to feel intimate in nature when using forms of engagement such as role play and media examples for discussion. The goal of the workshop can be made explicit so as to enroll the learner in the accomplishment of the stated objectives. Perhaps the most surprising discovery is that the workshop participants were able to perceive "equal status" with the presenter. In typical workshops, such as those presented at the National Rehabilitation Hospital, the consumer with a disability is not the one hosting the workshop. The consumer simply provides personal life experience to apply or illustrate

Table 11

Contact Theory Mean Scores by Group

Treatment Group	Goal Oriented	Sanction by Authority	Intimate Communication	Equal Status
Experiential	4.37	4.44	4.22	4.80
Didactic	4.40	4.07	4.25	4.66

certain principles (such as the social model of disability) in order to validate classroom discussion. There is a vast difference in the role of workshop "host" versus that of a "guest" of the organizers. The host who sets the agenda and is validated by authority is much more likely to be assigned "equal status" than someone who appears essentially as a prop or study aid. Such persons may be regarded as nothing more than an embodiment of a disability condition that does not promote equal status perceptions.

Status perceptions are not only influenced by the role played in the workshop, but also by the actual attributes of the presenter. The participants in this study were informed that the principal investigator was completing a PhD degree. To students seeking education, others further down that path may be regarded more highly than someone who is unemployed and receiving government financial subsidies. Marital status, age, and parenthood may also be influencing factors that were displayed but not controlled in this experiment. Any one of these factors may have contributed to the feeling that the participants shared equal status with the person who experienced the disability. Future research that more clearly assesses the effectiveness of Contact Theory may be welcomed by large healthcare corporations such as the National Rehabilitation Hospital as they address the aforementioned need for disability education among their staff.

Future research may be helpful in determining the best way to assess personal attitudes about disability. It is unclear if "I" statements would be better than situational vignettes. Differentiating the two types of attitudes (personal, social) will be helpful in determining future workshop content because healthcare organizations such as the National Rehabilitation Hospital are interested in modifying attitudes of staff members. It is unknown if focusing the workshop on social attitudes allows the participants to

adequately assess their personal stereotypes and prejudices—leaving them open for change. When answering the vignette-based MAS, the participant may see the questions as a test of cultural knowledge rather than a direct inquiry about their own comfort surrounding people with disabilities. Regarding the other approach used in this study, engaging in sport is thought to be a very powerful way to broach social stereotypes and restraints. However, there was no discussion in the experiential sport setting about social attitudes at all. This approach may have a greater effect on personal attitudes of the participants, but accurate measurement will need to be developed that will allow testing of new research hypotheses.

There are certain methods of assessment commonly used in the social sciences that are specifically designed to assess learning on a given topic. This learning requires the individual to clarify understanding and internalize a new way of thinking. The developers of the MAS used typical correlational studies to compare the results with other known scales, such as the Attitudes Toward Disabled Person scale (ATDP). If this tool is to be used for further research, it may need to involve retrospective pretest methodology to more clearly capture the change in the mind of the participant. When a person recalibrates his or her internal understanding of a concept, the metric of measurement surrounding the concept changes along with it. This process is called a response shift. Levinson, Gordon, and Skeff state that "response shift is a true phenomenon that *must be taken into account* [italics added] in the assessment of faculty development programs, and, potentially, other educational interventions" (1990, p. 451). To account for the response shift, participants are tested only once, after the intervention. The subject first rates where he or she is at that particular moment. Then they are asked

to retrospectively consider how they thought or felt prior to the intervention taking place. The greatest benefit is, perhaps, the recognition that the person's internal metric can be changed and measured through targeted interventions. The participant can actually acknowledge that he or she has changed his or her internal conceptions of an attribute or concept by responding to the "then" concept of pretesting. Rather than conceptualize this form of data gathering as a *weaker* form of the experimental design, it should be conceived of as a powerful ally in gathering data that accurately reflects participants' experiences. Howard et al. advocate the use of Then/Post testing as a more accurate alternative to the Pre/Post test for many research questions (Howard, Millham, Slaten, & O'Donnell, 1981, p. 90).

In order to establish what is being measured and the best way to measure it, research about disabilities will need further clarification in methodology. The MAS is a new tool that may move disability research forward by more accurately representing multidimensional attitudes about disability. It has clear differences when compared to older scales such as the ATDP and has exposed limitations in unidimensional assessments of a complex conceptualization. Although the MAS claims improvements in addressing the multidimensional nature of an attitude, the interpretation of the MAS data is still unclear. The tool may be an accurate assessment of personal attitudes or social awareness of attitudes, but it seems unlikely to be a fair appraisal of both.

Conclusion

Stigma surrounding disability is a problem on many levels when it becomes sanctioned in a society. The negative attitudes that result from stigma often interfere with social and professional relationships. Various healthcare organizations have found that

stigma interferes with the delivery of quality healthcare services and have made attempts to improve the attitudes of their staff members toward people who have visible disabilities. Academic institutions also have an opportunity to intervene and influence future professionals through selected curricula, labs, rotations, and workshops. Some exposure methods of the past have been criticized as patronizing and confirming of inaccurate stereotypes. In order to inform educators about effective disability awareness training exercises, researchers must be able to accurately measure attitudes about disability. Only then can definitive statements be made about how to expose or decrease stigmatizing attitudes toward people who have disabilities.

Contact between groups of people does not always result in decreased negative attitudes, and may confirm stereotypes in the minds of some participants. Research involving Contact Theory predicts that, in casual, unstructured contact situations, stereotypes are often confirmed and attitudes are frequently made worse. Contact Theory has a long history of use in decreasing prejudicial attitudes between groups of people based on race/ethnicity. Recently, the literature surrounding prejudice and stigma have merged, creating an opportunity for researchers to use Contact Theory as a guide to interaction surrounding disability (Phelan et al., 2008). The present study was intentionally planned and structured in way that maximized the potential for positive feelings to develop, displacing negative attitudes resulting in "friendliness" as described by Allport (1954).

This study compared two types of workshops that were structured around principles of Contact Theory. The comparison of the two workshops was greatly limited by issues surrounding the MAS instrument for measuring attitudes toward people with

disabilities. Therefore, the primary contribution of this investigation was in further exploration of measurement techniques surrounding attitudes about disability. The primary focus of ongoing inquiry in this respect is whether a person is able to fully disclose his or her own personal attitudes about disability on the MAS tool. Because the MAS utilizes a situational vignette, people may be cued to think about prevalent social responses to disability, avoiding any personal assessment of attitudes. Even if a person did consider his or her personal attitudes during the workshop, he or she may wish to look "good" on the assessment at the end of the workshop (social desirability bias). This may cause a reluctance to disclose the depth of his or her own personal stigma, which could create artificially low scores. Conversely, there may also be incentive to demonstrate mastery of the subject matter presented by exaggerating the occurrence of negative attitudes presented in the situational vignette, which could inflate the scores beyond reality.

Response patterns in this data set seem to indicate that attitudes are malleable, but interpretation is contingent upon better understanding of what is being measured. The exploration and manipulation of personal attitudes was the original intent of these workshops, but greater awareness of stigmatizing attitudes present in society may also be a valuable outcome for other lines of investigation. Future research will need to more accurately measure personal attitudes in order to guide educational practice or make assertions about effective inservice training for those already employed in the healthcare industry.

APPENDIX A

CONSENT DOCUMENT

THE EFFECT OF TWO DISABILITY-AWARENESS TRAINING MODELS ON STIGMATIZING ATTITUDES AMONG FUTURE HEALTHCARE PROFESSIONALS

The purpose of this research study is to investigate effective training methods to prepare future healthcare professionals to provide services to people with disabilities. We are doing this study because methods of "disability awareness training" in the past have not always been guided by theory.

I would like to ask you to complete the accompanying questionnaire and place it in the collection envelope provided at the desk. Your help in determining effective ways to conduct "disability awareness" training sessions for future healthcare providers will be of great benefit to professionals and those who receive their services.

There are minimal risks to participating in this study. Some participants may be asked to use a wheelchair for a short time. This experience could possibly lead to sore fingers, hands, or shoulders.

The information you disclose is valuable to me, and will be guarded in two ways. The survey responses will be anonymous, with no identifiers on them. In some cases, the nature of small groups of people may allow identification through other disclosed information. To avoid any risk of this information becoming public, the responses will be maintained in a locked cabinet and analyzed on password-protected computers.

If you have any questions, concerns, or complaints or if you feel you have been harmed by this research please contact Karen Paisley, Department of Parks, Recreation, and Tourism, University of Utah at 801-581-8542.

Contact the Institutional Review Board (IRB) if you have questions regarding your rights as a research participant. Also, contact the IRB if you have questions, complaints or

concerns which you do not feel you can discuss with the investigator. The University of Utah IRB may be reached by phone at (801) 581-3655 or by e-mail at irb@hsc.utah.edu.

It should take less than 10 minutes to complete the questionnaire. Participation in this study is voluntary. You can choose not to take part and you can also choose not to finish the questionnaire or omit any question you prefer not to answer without penalty or loss of benefits.

By returning this questionnaire, you are giving your consent to participate.

Thank you very much for your willingness to participate in this study. Your insight will be very helpful in the preparation of future professionals in the healthcare delivery system.

APPENDIX B

THE MULTIDIMENSIONAL ATTITUDES

SCALE TOWARDS PERSONS

WITH DISABILITIES

Vignette:

"Imagine the following situation. Joseph/Michelle went out for lunch with some friends to a coffee shop. A man/woman in a wheelchair, with whom Joseph/Michelle is not acquainted, enters the coffee shop and joins the group. Joseph/Michelle is introduced to this person, and shortly thereafter, everyone else leaves, with only Joseph/Michelle and the man/woman in the wheelchair remaining alone together at the table. Joseph/Michelle has 15 minutes to wait for his/her ride. Try to imagine the situation."

People experience a variety of *emotions* when they are involved in such a situation. Following is a list of possible emotions, which may arise before, during, and/or after such a situation. Please rate on each line the likelihood that this *emotion* might arise in Joseph/Michelle:

		Degree of Likelihood			
Affect:	**Not at all**				**Very much**
Tension	1	2	3	4	5
Stress	1	2	3	4	5
Helplessness	1	2	3	4	5
Nervousness	1	2	3	4	5
Shame	1	2	3	4	5
Relaxation	1	2	3	4	5
Serenity	1	2	3	4	5
Calmness	1	2	3	4	5
Depression	1	2	3	4	5

Fear	1	2	3	4	5
Upset	1	2	3	4	5
Guilt	1	2	3	4	5
Shyness	1	2	3	4	5
Pity	1	2	3	4	5
Disgust	1	2	3	4	5
Alertness	1	2	3	4	5

People experience a variety of *cognitions* when they are involved in such a situation. Following is a list of possible thoughts that may arise before, during, and/or after such a situation. Please rate on each line the likelihood that this *cognition* might arise in Joseph/Michelle:

		Degree of Likelihood			
Cognition	**Not at all**				**Very much**
He/she seems to be an interesting guy/girl.	1	2	3	4	5
He/she looks like an OK person.	1	2	3	4	5
We may get along really well.	1	2	3	4	5
He/she looks friendly.	1	2	3	4	5
I enjoy meeting new people.	1	2	3	4	5
He/she will enjoy getting to know me.	1	2	3	4	5
I can always talk to him/her about things that Interest both of us.	1	2	3	4	5
I can make him/her feel more comfortable.	1	2	3	4	5

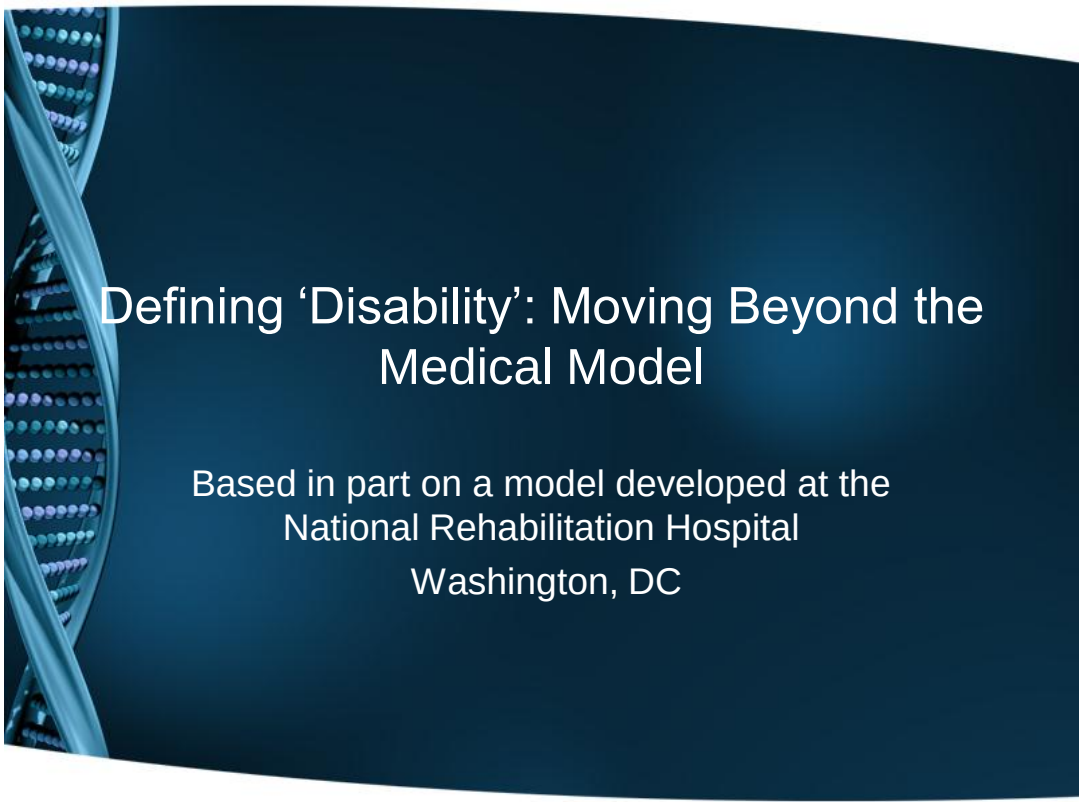
Why not get to know him/her better?	1	2	3	4	5
He/she will appreciate it if I start a conversation.	1	2	3	4	5

People experience a variety of *behaviors* when they are involved in such a situation. Following is a list of possible behaviors that may arise before, during, and/or after such a situation. Please rate on each line the likelihood that Joseph/Michelle would *behave* in the following manner:

		Degree of Likelihood			
Behavior	**Not at all**				**Very much**
Move away	1	2	3	4	5
Get up and leave	1	2	3	4	5
Read the newspaper or talk on a cell phone	1	2	3	4	5
Continue what he/she was doing	1	2	3	4	5
Find an excuse to leave	1	2	3	4	5
Move to another table	1	2	3	4	5
Initiate a conversation if he/she doesn't make the first move	1	2	3	4	5
Start a conversation	1	2	3	4	5

APPENDIX C

WORKSHOP CURRICULUM



Slide #2 was deleted because of copyright restrictions regarding the use of a cartoon strip of Bloom County wherein the main character uses a wheelchair and confronts social stigma.

Reflect on your reactions to the following statement:

- A person with a permanent impairment can have a happy life.

Research has shown that a lifetime of experience forms certain attitudes…

Lowered Expectations
- Capable of less
- Not held to the same standard

Interaction Strain
- Shorter contact or conversation
- Less eye contact
- More impersonal or trivial small talk

Rejection of Intimacy
- Unwilling to "touch" or be close
- Not thought of as a romantic possibility

Generalized Rejection
- Derogatory reaction
- Negative thoughts

Authoritarian Benevolence
- "Sweetly disgusting"
- Demeaning
- I'll take "care" of you

Attitudes cont.

Emotional Consequences of Disability
- Maladjusted
- Angry, irritable, depressed, suicidal

It Could Happen to Me
- Anxiety about loss of lifestyle
- Reminder about being vulnerable

Functional Limitations/ SPREAD
- Seeing more restrictions than reality
- Piling on other problems

The Economic Threat
- Drain in society through entitlements or access

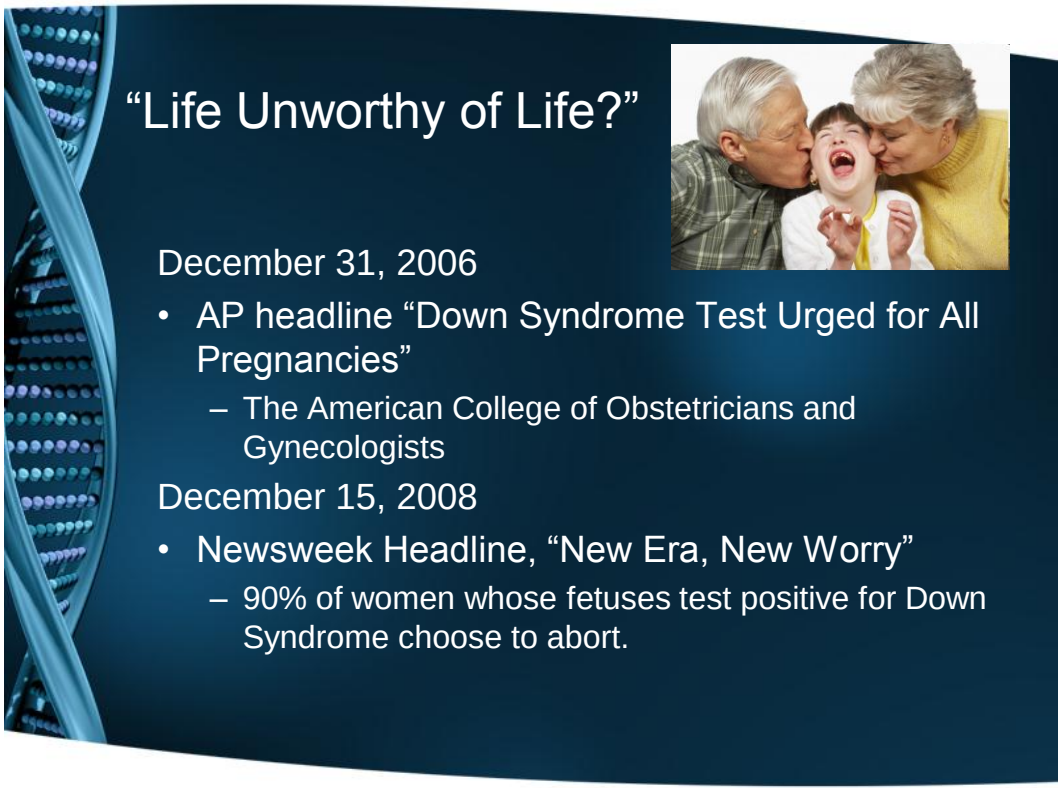
The Safety Threat
- Connecting people to crime and violence
- Especially prevalent in Mental Illness

Goals

- To look at social constructions of ‘disability’
- To provide an alternative understanding of the concept of ‘disability’
- To introduce the social model of disability
- To raise awareness about disability from the perspective of a person with a disability

Slides #8 & 9 were deleted because of copyright restrictions regarding the use of a Nike corporation advertisement for the Air Dri-Goat running shoe which was published in Backpacker magazine and disparages the life of those who experience a spinal cord injury.

Slide #10 was deleted because of copyright restrictions regarding the use of a seat-belt promotional advertisement known as “Hold on to Dear Life” published by the Primary Children’s Medical Foundation. Seat belt use was promoted by associating negative circumstances with spinal cord injuries.



Slide #12 was deleted because of copyright restrictions involving the use of a short clip of the movie Million Dollar Baby wherein the central character wishes to die rather than live life with a spinal cord injury.

Slide #13 was deleted because of copyright restrictions regarding the use of a promotional video produced by the Chicago 2016 Olympic/Paralympic bid committee in which Paralympians were portrayed as the same caliber athletes as Olympians.

Slide #14 was deleted because of copyright restrictions regarding the use of a Nike corporation advertisement titled "No Excuses" which displays the dedication to play sport in spite of any obstacle including spinal cord injury.

Slide #15 was deleted because of copyright restrictions regarding the use of a video advertisement for Quickie Wheelchairs and Monoskis, a division of Sunrise Medical.

People who will be future healthcare professionals need to examine the issue more deeply

- Medical schools
- Various Professionals
  - Occupational Therapy
  - Physical Therapy
  - Therapeutic Recreation
  - Social Work
  - Psychology
  - Nursing
  - Speech & Language Pathology

Models of Disability

- Individual: Disability is located in the individual with an emphasis on coping and acceptance
  - The FDR mentality


Disability as a personal journey


My “personal journey” as defined by rehab staff in 1974.

Models of Disability

- Medical: Disability defined in reference to the person's functional status or condition with an emphasis on cure/reduction of functional deficits
  - Disability associated with loss (e.g. loss of function, impairment, deficits)
  - The sick role
  - Rehabilitation

Slide #21 deleted because of copyright restrictions regarding a graphic image representing the medical model of disability created by Mike Oliver.

The Social Model of Disability

- Disability is a function of the interaction of individuals and the social and physical environments
- Focus on barriers, disabling and enabling factors in the physical environment and society
- Concept of "functional limitations" as influenced by social roles, as opposed to medical quantifiers (e.g. ability to care for a child vs. how many lbs. can be lifted)

The Social Model of Disability, cont.

- Disability as expression of human diversity and not as something in need of ‘cure’ or ‘correction’
- More ‘in tune’ with the views and experiences of people with disabilities
- Emphasizes social and economic participation over medical orientation

Disability, according to the social model, is all the things that impose restrictions on disabled people; ranging from individual prejudice to institutional discrimination, from inaccessible buildings to unusable transport systems, from segregated education to excluding work arrangements, and so on.

Further, the consequences of this failure do not simply and randomly fall on individuals but systematically upon disabled people as a group who experience this failure as discrimination institutionalized through society. (Oliver, 1996, p.33)

Slide #25 was deleted because of copyright restrictions regarding the use of a graphic image representing the social model of disability created by Mike Oliver.

Slide #26 was deleted because of copyright restrictions. It contained a side by side comparison of the graphics representing the medical and social model of disability created by Mike Oliver.

Slide #27 was deleted because of copyright restrictions. On the slide was a representation of the "Functional Independence Measure" (FIM) that is widely used in healthcare assessments.

Disability Allies

- Healthcare professionals will not recognize the need for disability "allies" if the problem is seen through the *medical model* lens
- The need for disability allies only arises from the idea that disability is "constructed" by society and can be deconstructed
- The idea of allies is aligned with social justice models where ending oppression is the main goal

Impairment vs. Disability

- Impairment
  - Biological, functional, cognitive
- Disability
  - Reduced participation due to society's failure to accommodate the needs of individuals

International Classification of Functioning, Disability & Health (ICF)

- Developed by WHO, replaces ICIDH
  (International Classification of Impairments, Disabilities, and Handicaps)
- Concept of "Functioning"
  - Body functions, activities, and participation
- The concept of 'Disability'
  - The interaction between impairments and activity limitations or restrictions in participation

Slide #32 deleted because of copyright restrictions and represented the disability and disease as interpreted by the World Health Organization.

Summary—A matter of orientation and degree

- *Disability*: In the context of health experience, a disability is any restriction or lack (resulting from an impairment) of ability to perform an activity in the manner or within *the range considered normal* for a human being.
  (World Health Organization)
- *Disability*: The loss or limitation of opportunities to take part in the normal life of the community on an equal level with others *due to physical and social barriers*.
  (Disabled People's International)
- *Disability*: The disadvantage or restriction of activity *caused by a contemporary social organization* which takes no or little account of people who have physical impairments and thus excludes them from the mainstream of social activities.
  (Union of the Physically Impaired Against Segregation)

To perform an activity in the manner or within *the range considered normal* for a human being?

- The International Amateur Athletics Association, which governs track and field, is talking about adopting a rule to prevent South African Oscar Pistorius from competing in the sprints in Beijing because he's a double below-the-knee amputee and runs on springy prosthetics. The IAAF says not having legs gives Pistorius an unfair advantage.

- Pistorius finished second in the 400 meters at the South African national championships (2007) against able-bodied runners.

ESPN Video: Blade Runner,
http://espn.go.com/video/clip?id=3348340

The Debate Continues…

An Equalizer or an Edge?

Do prosthetic legs simply level the playing field for Pistorius, compensating for his disability, or do they give him an inequitable edge via what some call techno-doping?

Experts say there have been limited scientific studies on the biomechanics of amputee runners, especially those missing both legs. And because Pistorius lost his legs as an infant, his speed on carbon-fiber legs cannot be compared with his speed on natural legs.

Track and field's world governing body, based in Monaco and known by the initials I.A.A.F., has recently prohibited the use of technological aids like springs and wheels, disqualifying Pistorius from events that it sanctions.

"With all due respect, we cannot accept something that provides advantages," said Elio Locatelli of Italy, urging Pistorius to concentrate on the Paralympics that will follow the Olympics in Beijing. "It affects the purity of sport. Next will be another device where people can fly with something on their back."

http://www.nytimes.com/2007/05/15/sports/othersports/15runner.html?ex=1181448000&en=b0018c58044c7832&ei=5070

The Latest Ruling

May 16, 2008. After an excruciating and absurd debate, double-amputee sprinter Oscar Pistorius will be allowed to compete in the Olympics. Pistorius won his appeal to the Court of Arbitration for Sport (CAS) today which immediately overturned a ruling by the IAAF which stated Pistorius gained an unfair advantage from his prosthetics.

Two days of testing at the German Sport University's Institute of Biomechanics yielded data showing that to run at a given speed, Pistorius required 25% less energy expenditure than his able bodied peers. It further quantified Pistorius's prostheses as 30% more efficient than a human ankle.

"The panel was not persuaded that there was sufficient evidence of any metabolic advantage in favor of a double-amputee using the Cheetah Flex-Foot," CAS said. "Furthermore, the CAS panel has considered that the IAAF did not prove that the biomechanical effects of using this particular prosthetic device gives Oscar Pistorius an advantage over other athletes not using the device."

http://www.popsci.com/score/article/2008-05/double-amputee-sprinter-cleared-olympic-competition

Ironically, in the midst of this worldwide hullabaloo, another amputee has quietly qualified for the Olympics in 10-km swimming. Fellow South African Natalie Du Toit lost her leg in 2001 and competes without a prosthetic which begs a sad but necessary question:

How long until some governing body requires testing to quantify whether her reduction in drag is unfair? Sometimes the science shouldn't matter.

http://www.popsci.com/score/article/2008-05/double-amputee-sprinter-cleared-olympic-competition

Key Points to Remember

- The individual/medical model identifies ‘disability’ as a problem located in the individual and emphasizes the biological differences compared to the general population
- The social model looks beyond the individual and focuses on the barriers that are imposed on individuals by society and environment

Key Points to Remember, cont.

- Most people with disabilities think about their lives in terms of the social model of disability
- The International Classification of Functioning, Disability and Health (ICF) developed by the World Health Organization (WHO) recognizes the difference between impairment and social participation

People First Terminology helps shift the focus away from impairment/diagnosis

- People-first language reflects individuality, equality and dignity.
  - Used by the American Psychological Association (APA)
  - Used by the Associated Press (AP)

Diagnosis is an attribute of a person, not an 'identity'

- Identity should be built around roles we play
  - Father
  - Husband
  - Son
  - Scoutmaster
  - Cyclist
  - XC Skier
  - Paralympian
  - Social Worker
  - Recreation Therapist
  - Fisherman
  - Educator
  - Doctoral Candidate

Don’t turn an attribute/adjective into a noun

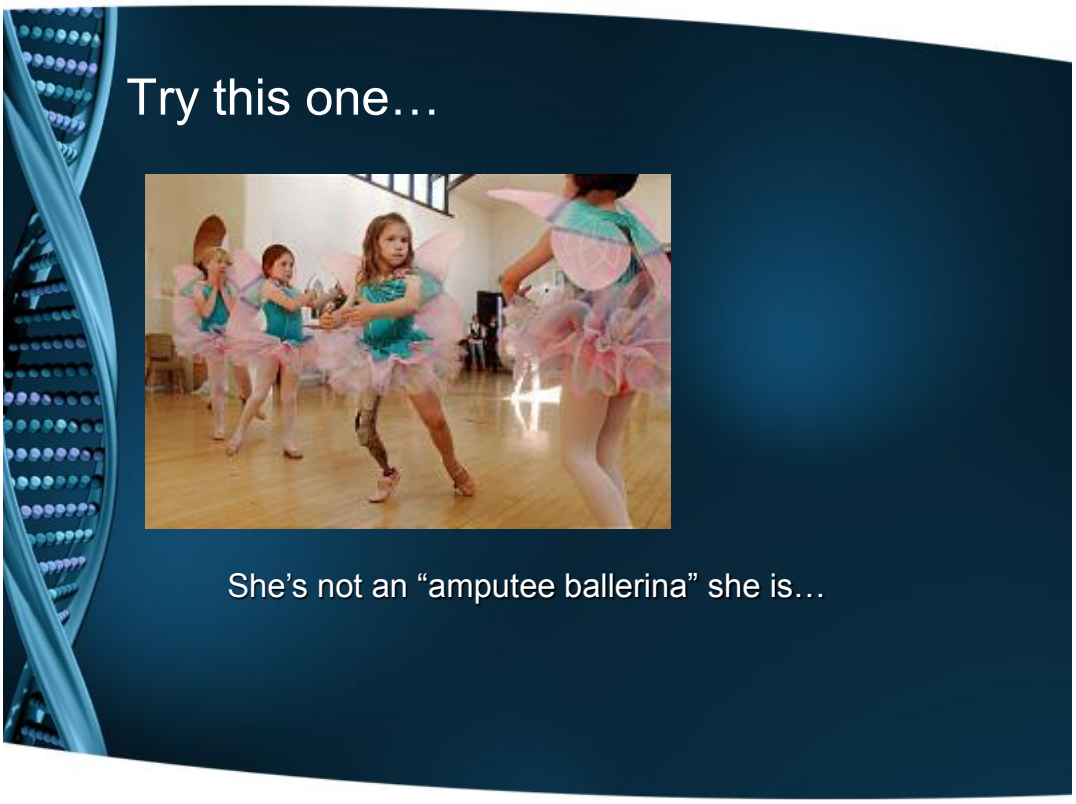
- A handicapped parking space
- Focus on the individual, not on his or her disability, which is only one facet of the person
  - Paraplegia not paraplegics
  - Diabetes not diabetics
  - Muscular dystrophy not dystrophics
  - Ostomy not ostomates
  - Amputation not amputees

Examples of ‘people first’

Wheelchair Person	*becomes*	Person who uses a wheelchair
Disabled guy	*becomes*	Guy with a disability
T12 para	*becomes*	Athlete with a T12 injury
Amputee	*becomes*	Athlete with an amputation
Blind skier	*becomes*	Skier with a visual impairment
CP athlete	*becomes*	Athlete with CP (cerebral palsy)

Slide #44 was deleted because of copyright restrictions. It contained video scenes from the movie I am Sam which demonstrate the problems associated with labeling people according to their medical diagnosis.

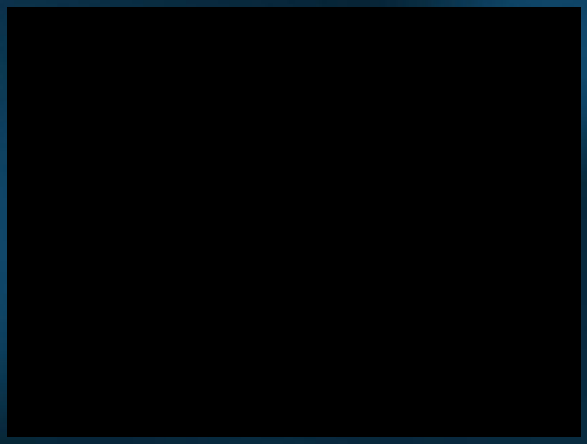
Slide #45 deleted because of copyright restrictions. The cartoon captures public frustration with the use of politically correct language and was created by John Callahan.



- Emphasize abilities, not limitations.
  - Say "*uses a wheelchair*" or "*walks with crutches*"; not "confined to a wheelchair, is wheelchair bound, or is crippled."
  - Similarly, avoid use of negative emotional descriptors such as "*unfortunate*" or "*pitiful*."
  - Avoid other emotionally charged descriptors as well such as "courageous" or "overcame his disability" or "sheer determination."

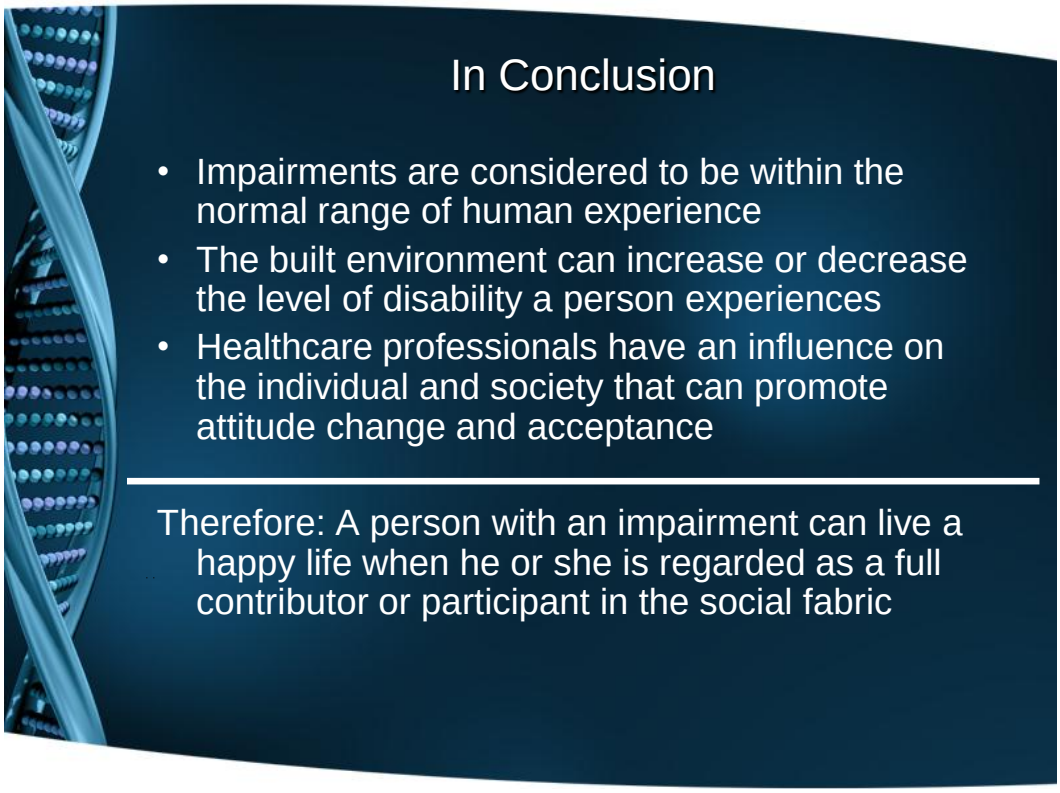
Aaron Fotheringham

- http://www.nitrocircusftp.com/previews/NCLive/Aaron_intro/



Slide #50 was deleted because of copyright restrictions involving a cartoon from the strip Bloom County in which the central character finds friendship through similarity.

Slide #51 was deleted because of copyright restrictions involving a cartoon by John Callahan in which characters identify difference based on "other" status.


In Conclusion
• Impairments are considered to be within the normal range of human experience
• The built environment can increase or decrease the level of disability a person experiences
• Healthcare professionals have an influence on the individual and society that can promote attitude change and acceptance
Therefore: A person with an impairment can live a happy life when he or she is regarded as a full contributor or participant in the social fabric

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